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S1.100

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August 6, 1997

Reference No. 6029-50

Mr. Regan S. Williams
State Project Coordinator
Ohio EPA - Division of
Emergency & Remedial Response
2110 East Aurora Road
Twinsburg, Ohio 44087

128685

Dear Mr. Williams:

Re: Hydraulic Monitoring and
Sixth Round of Groundwater Quality Monitoring
Summit National Superfund Site
Deerfield, Ohio

In accordance with the Consent Decree and Statement of Work (SOW) requirements for the Summit National Superfund Site (Site) in Deerfield, Ohio, the Summit National Facility Trust (SNFT) herewith submits two copies of the sixth round of groundwater analytical results and the groundwater hydraulic monitoring data required by the groundwater effectiveness monitoring program for the Site. The sixth round of groundwater sampling was conducted during the period of May 19 to 23, 1997.

A. Sixth Round Groundwater Quality Monitoring

As required by the SOW, the sixth round of groundwater sampling included sampling of the water table unit (WTU), upper intermediate unit (UIU), lower intermediate unit (LIU), and Upper Sharon Unit (USU) wells. Consistent with the September 13, 1996 letter to USEPA and OEPA, the samples collected during this sixth round of groundwater quality monitoring were analyzed for the following SSIPL parameters by Accutest of Dayton, New Jersey:

Volatile Organic Compounds

1,1-Dichloroethane
1,2-Dichloroethane
1,2-Dichloroethene, Total
2-Butanone (Methyl Ethyl Ketone)
Acetone
Ethylbenzene
Toluene

Inorganic Compounds

Cadmium, Total
Lead, Total
Nickel, Total

August 6, 1997

Reference No. 6029-50

- 2 -

Trichloroethene
Xylenes, Total

Attachment A is a memorandum summarizing the groundwater quality monitoring field activities for the sixth round of the groundwater quality effectiveness monitoring program, and Attachment B presents the SSIPL analytical results of the groundwater samples collected as part of the startup, second, third, fourth, and fifth rounds of groundwater sampling at the Site. CRA's data quality assurance evaluation for the sixth round of groundwater analyses is included in Attachment C. All the analytical data were found to exhibit acceptable levels of accuracy and precision and were used with the qualifications noted in Attachment C.

A summary of the SSIPL compounds for the six rounds of groundwater sampling conducted at the Site from startup of the groundwater extraction system in 1994 for each monitoring well are presented on attached Plans WTU, LIU, UIU, and USU.

Prior to sampling of the LIU and USU wells, MW 322, MW 324, and MW 420 were re-developed, as detailed in the field memorandum presented in Attachment A, in an attempt to reduce the pH of the groundwater samples, and to obtain representative samples of groundwater from these wells. The pH of the groundwater in MW 322 and MW 324 was reduced to 9.2 and 9.3, respectively, during the redevelopment process, while the pH of the groundwater in MW 420 could only be reduced to 12.1. It is proposed to repeat the well development of these wells prior to commencing the next round of groundwater sampling.

In comparison with the fifth round of groundwater sampling conducted at the Site, no significant changes in concentrations of the SSIPL parameters are apparent. Although methylbenzene (toluene) was detected in MW 420 at 0.85 micrograms per liter ($\mu\text{g/l}$), the detected concentration is well below the federal maximum contaminant level (MCL) criteria for drinking water of 1,000 $\mu\text{g/l}$.

Analytical results of the surface water and sediment sample collected at the confluence of the south and east drainage ditches, as noted in the field sampling memorandum included in Attachment A, will be submitted under separate cover.

August 6, 1997

Reference No. 6029-50

- 3 -

B. Groundwater Hydraulic Monitoring

Groundwater levels at the Site were measured on May 19, 1997, and are presented in Attachment D. The groundwater hydraulic data were reduced to elevations and entered into a computer database as required by the SOW. Groundwater contours for the WTU, UIU, LIU, and the USU for the May 1997 monitoring event are presented on figures in Attachment E. Groundwater hydrographs for the period of November 1994 to May 1997 for each of the wells and piezometers used for hydraulic monitoring are included in Attachment D.

The groundwater elevation contours included in Attachment E were prepared incorporating an exponential variogram and a linear drift function with the Kriging interpolation method (as implemented in SURFER For Windows, Golden Software, Inc., Golden, Colorado, 1995).

Review of the groundwater elevation data for the Site allows the following observations and conclusions to be made regarding the groundwater flow system in the vicinity of the Site:

1. the groundwater elevation contours for the WTU demonstrate that the operation of the pipe and media drain system is maintaining hydraulic containment of the on-Site portion of the WTU. Hydraulic containment of significant portions of the WTU to the north, west, and south of the Site also is being achieved by the pipe and media drain operation;
2. the horizontal direction of groundwater flow is generally southeasterly in the WTU as has been consistently observed in the past. The groundwater flow direction in all the bedrock units (i.e. UIU, LIU, and USU) appears to be in a generally easterly direction. The potable water well groundwater elevation is not considered to be representative of the groundwater flow patterns; and
3. the surcharging of the pipe and media drain as evidenced by the water levels in the manholes being higher than the perforated pipe invert elevations at the manholes is due to the shutdown of the groundwater treatment plant prior to and during the sixth round of groundwater monitoring conducted at the Site. The treatment plant was shut down to allow maintenance activities to be performed on the groundwater

August 6, 1997

Reference No. 6029-50

- 4 -

extraction and treatment system (high pressure cleaning of the forcemain from the wet well to the treatment plant and the forcemains within the treatment plant, and cleaning out and replacement of the sand media in the sand filter). However, the groundwater level measurements indicate that the pipe and media drain at the Site is still providing containment of the groundwater at the Site boundary.

In accordance with the effectiveness monitoring program for the Site, groundwater hydraulic monitoring will continue on a quarterly basis, and the groundwater quality monitoring will continue on a biannual basis.

SNFT trusts this letter report is sufficient for the groundwater effectiveness monitoring requirements as required by the SOW for the Site. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES



Steve Whillier, P. Eng. (ON)

SW/dm/4

Encl.

c.c.: Anthony Rutter (USEPA)
Richard McAvoy (Black & Veatch)
Mark Whitmore (SNFT)
Patrick Steerman (SNFT)
Kenneth Walanski (SNFT)
Douglas Haynam (SNFT)
Jack Michels (CRA)
Richard Murphy (CRA)
Mark Witherspoon (Site Operator)

ATTACHMENT A

**FIELD MEMORANDUM
SIXTH ROUND OF GROUNDWATER SAMPLING**

CRA

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MEMO

TO: Stephen Whillier/Mike Mateyk REFERENCE NO.: 6029-50
FROM: David Tyran/Joe VanderLinden/js/2 DATE: June 5, 1997
RE: Sixth Round of Groundwater Sampling
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
CC: Jack Michels

The following is a brief summary of the Site activities associated with the sixth round of groundwater sampling conducted from May 19 to May 23, 1997 at the Summit National Superfund Site (Site) in Deerfield Township of Portage County, Ohio.

On-Site Personnel

Field activities were conducted by Conestoga-Rovers & Associates (CRA's) Joe VanderLinden and TreaTek-CRA's David Tyran. Mark Witherspoon of TreaTek-CRA was on Site for treatment plant operations.

Water Levels

A complete round of water level readings were taken from all on-Site and off-Site monitoring wells and collection manholes on May 19, 1997 using a Solinst electronic water level tape. The water level tape was decontaminated between water level measurements at each monitoring well. The decontamination sequence involved first rinsing the tape with potable water, and final rinsing with deionized water. A water level reading was also taken from the potable water supply well just north of the treatment plant. Well depths were also sounded using a weighted measuring tape. The water level measurements and calculated water elevations are provided in Table 1.

Purging and Sampling of Monitoring Wells

During purging of all monitoring wells, readings of pH, specific conductivity, temperature and turbidity (dependent on field observations) were taken after the removal of each standing well volume. A summary of the well development data is provided in Table 2. The quality of the evacuated water was also noted for color and

clarity. All purge waters (approximately 1,200 gallons) from the monitoring wells were containerized and treated at the on-Site treatment plant.

Once the monitoring wells were purged, groundwater samples were collected for analyses of the Site-specific Indicator Parameter List (SSIPL) of select volatile organic compounds (VOCs) and metals (unfiltered).

Monitoring wells that were purged using dedicated Waterra foot valves and tubing were sampled using a precleaned stainless-steel bailer (as detailed below). Once purging of the monitoring well was completed, the tubing was removed from the well and drained. The tubing was rolled up and placed in a new clean garbage bag. The standing water within the well was allowed to settle so that a clear sample could be collected. After sampling of the well was completed, the tubing was placed back down the well.

The Lower Intermediate Unit (LIU) and Upper Sharon Unit (USU) monitoring wells were purged using a precleaned 2-inch diameter Grundfos pump (as detailed below) with dedicated tubing. Once purging of the monitoring well was completed, the pump and tubing were removed. Sampling was completed using a pre-cleaned stainless steel bailer after allowing the standing water to settle.

Collected samples were labeled and placed in a cooler and maintained cool with ice. The samples were shipped daily by Federal Express to Accutest Laboratories in Dayton, New Jersey under chain of custody (COC) protocols. Copies of the COCs are provided in Attachment A.

Decontamination Procedures

Stainless-steel bailers were cleaned between monitoring wells by using the following decontamination sequence:

- i) clean with brush in potable water and alconox detergent;
- ii) rinse thoroughly with potable water;
- iii) rinse thoroughly with deionized water; and
- iv) allow the bailer to air dry on clean aluminum foil.

Once the bailers were allowed to air dry thoroughly, they were wrapped in aluminum foil prior to use at each monitoring well.

The Grundfos pump was cleaned between monitoring wells by using the following decontamination sequence:

- i) run pump in a pail filled with potable water and alconox (pump discharge water back into pail);

- ii) run pump in a pail filled with potable water (pump discharge water back into pail);
- iii) rinse pump with deionized water; and
- iv) wipe pump with clean paper towel and wrap in aluminum foil.

Water Table Unit (WTU) Monitoring Well Sampling

All of the WTU monitoring wells, except MW4, MW101, MW102, MW103, MW104, MW106, MW115, and MW116 were purged using dedicated Waterra foot valves and tubing. Monitoring wells MW101, MW102, MW103, MW104, MW106, MW115, and MW116 were purged using a precleaned stainless steel bailer. Monitoring well MW4 was purged using a precleaned 2-inch diameter Grundfos pump.

As shown in Table 2, seven out of the 19 WTU monitoring wells were purged dry. All dry wells recovered sufficiently for complete sample sets to be taken.

Upper Intermediate Unit (UIU) Monitoring Well Sampling

All of the UIU monitoring wells were purged using dedicated Waterra foot valves and tubing. As shown in Table 2, eight of the 12 UIU monitoring wells went dry before reaching stabilization. All eight wells recovered sufficiently for complete sample sets to be taken.

Lower Intermediate Unit (LIU) Monitoring Well Sampling

The LIU monitoring wells were purged using a precleaned 2-inch diameter Grundfos pump with dedicated tubing or dedicated Waterra foot valves and tubing. As shown in Table 2, only monitoring wells MW301, MW305, and MW306 had sufficient recharge to allow stabilization by purging three or more volumes. The remaining 11 wells were purged dry.

Upper Sharon Unit (USU) Monitoring Well Sampling

All seven USU monitoring wells were purged using a precleaned 2-inch diameter Grundfos pump with dedicated tubing. With the exception of monitoring well MW421 all wells were purged dry. The dry wells recovered sufficiently for complete sample sets to be taken.

Potable Well Sample

The on-Site potable well was sampled for the Target Compound List (TCL) parameters. Sampling of the well was accomplished by opening the in-line valve located just before

the filter and letting it run for 15 minutes. The samples were collected by holding the sample jars directly under the flow from the valve.

Surface Water/Sediment Sample

Surface water and sediment samples were collected at the confluence of the south and east drainage ditches. Samples will be analyzed for the full TCL organic parameter list.

Field QA/QC Program

Field QA/QC samples collected during the sixth round of groundwater sampling included a total of six blind field duplicates, six stainless-steel bailer rinsate blanks. Three matrix spike and matrix spike duplicates (MS/MSDs) were also collected. One trip blank was sent with each shipment of samples to the laboratory by placing all VOC samples in the same cooler with the trip blank. A sample key is provided in Table 3.

Stainless-steel bailer rinsate blanks were collected by pouring lab-supplied deionized water into a precleaned bailer and then filling the sample containers.

Monitoring Well Redevelopment

In addition to the sampling activities completed this round three monitoring wells with historically high pH readings were redeveloped. Monitoring wells MW322, MW324, and MW420 were purged to dryness in the morning and evening for four consecutive days (May 19 through May 22, 1997). Table 4 contains a summary of the redevelopment volumes and pH readings. Groundwater samples were taken after the completion of the redevelopment.

TABLE 1
WATER LEVELS (MAY 19, 1997)
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well ID	Top of Riser ^(a) (Ft. AMSL)	Top of Casing ^(a) (Ft. AMSL)	Measured Water Level (Ft. BTOR)	Water Elevation (Ft. AMSL)	Measured Bottom (Ft. BTOR)
MW4	1089.37	1091.09	9.53	1079.84	24.91
MW11	1095.93	1096.49	19.20	1076.73	25.55
MW101	1107.57	1107.70	8.75	1098.82	24.15
MW102	1100.17	1100.42	7.04	1093.13	21.33
MW103	1096.22	1096.59	3.31	1092.91	21.03
MW104	1099.81	1100.73	22.62	1077.19	29.76
MW105	1101.32	1101.64	24.47	1076.85	28.91
MW106	1102.88	1103.58	25.08	1077.80	34.84
MW107	1098.27	1098.65	20.07	1078.20	30.80
MW108	1091.96	1092.70	16.94	1075.02	18.31
MW109	1087.42	1087.77	4.68	1082.74	10.99
MW110	1086.87	1087.21	6.83	1080.04	15.20
MW111	1099.67	1099.97	22.80	1076.87	29.13
MW113	1088.46	1088.64	8.85	1079.61	16.26
MW114	1097.27	1097.63	14.23	1083.04	21.52
MW115	1101.83	1102.41	22.21	1079.62	40.99
MW116	1105.54	1106.07	24.50	1081.04	26.22
MW117	1123.97	1124.19	44.95	1079.02	61.10
MW118	1098.38	1098.68	25.50	1072.88	37.21
MW201	1107.52	1107.73	12.28	1095.24	63.78
MW202	1099.50	1099.99	25.69	1073.81	50.19
MW203	1103.35	1103.60	12.10	1091.25	53.89
MW204	1098.01	1098.29	12.73	1085.28	46.54
MW205	1100.90	1101.21	21.26	1079.64	53.20
MW206	1103.22	1103.44	30.59	1072.63	63.62
MW207	1098.51	1098.82	19.78	1078.73	49.81
MW209	1087.66	1087.91	10.82	1076.84	37.62
MW219	1108.24	1108.37	25.25	1082.99	63.24
MW220	1090.92	1091.23	10.22	1080.70	38.74
MW223	1098.37	1097.81	20.57	1077.80	45.30
MW224	1089.41	1088.87	17.43	1071.98	36.42
MW301	1107.91	1108.87	28.62	1079.29	81.57
MW302	1100.39	1100.66	26.71	1073.68	79.54
MW303	1103.15	1103.41	27.49	1075.66	69.42
MW304	1097.73	1098.06	16.10	1081.63	72.29
MW305	1101.22	1101.95	27.70	1073.52	68.11
MW306	1103.14	1103.34	28.79	1074.35	92.18
MW307	1098.83	1099.17	24.22	1074.61	77.29
MW309	1087.81	1087.91	13.31	1074.50	60.26
MW319	1108.07	1108.20	25.08	1082.99	77.28
MW320	1091.14	1091.45	20.38	1070.76	100.84
MW321	1095.32	1095.87	20.56	1074.76	69.51
MW322	1098.88	1099.75	16.98	1081.90	70.32
MW323	1097.51	1098.28	24.32	1073.19	84.17
MW324	1089.39	1089.65	17.62	1071.77	90.22
MW401	1099.75	1100.92	35.11	1064.64	141.84

TABLE 1
WATER LEVELS (MAY 19, 1997)
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well ID	Top of Riser ⁽¹⁾ (Ft. AMSL)	Top of Casing ⁽¹⁾ (Ft. AMSL)	Measured Water Level (Ft. BTOR)	Water Elevation (Ft. AMSL)	Measured Bottom (Ft. BTOR)
MW402	1089.90	1090.69	33.63	1056.27	131.49
MW414	1096.99	1097.50	24.84	1072.15	103.46
MW415	1102.25	1102.66	28.62	1073.63	89.75
MW420	1091.66	1091.79	24.60	1067.06	121.99
MW421	1099.93	1100.50	28.86	1071.07	104.36
MW422	1107.38	1108.13	20.28	1087.10	112.61
POTABLE	1099.34	1099.42	75.27	1024.07	-
PZ-1	1104.43	1104.77	10.08	1094.35	17.39
PZ101	1108.53	1108.63	16.22	1092.31	31.69
PZ102	1100.21	1100.54	12.94	1087.27	26.88
PZ103	1093.98	1094.33	7.92	1086.06	19.64
PZ104	1097.54	1098.07	16.58	1080.96	25.49
PZ105	1101.60	1102.14	22.02	1079.58	41.01
PZ106	1102.23	1102.78	24.51	1077.72	34.00
PZ201	1099.74	1100.06	21.22	1078.52	46.37
PZ202	1101.56	1101.91	23.51	1078.05	55.00
PZ203	1098.31	1098.41	21.07	1077.24	51.66
PZ204	1095.41	1096.16	17.06	1078.35	50.14
PZ205	1096.63	1096.82	21.51	1075.12	42.39
PZ206	1088.05	1088.30	13.67	1074.38	38.93
PZ207	1091.36	1091.84	11.56	1079.80	38.78
PZ301	1100.07	1100.40	19.04	1081.03	68.57
PZ302	1101.25	1101.45	26.58	1074.67	72.70
PZ303	1098.39	1098.55	24.06	1074.33	81.11
PZ305	1096.49	1096.68	21.96	1074.53	59.73
PZ306	1088.35	1088.60	15.85	1072.50	99.88
PZ307	1091.40	1092.15	18.31	1073.09	70.95
MH1	1102.78	-	25.49	1077.29	28.94
MH2	1101.04	-	23.81	1077.23	28.00
MH3	1100.95	-	23.73	1077.22	28.40
MH4	1100.05	-	22.86	1077.19	29.92
MH5	1095.68	-	18.67	1077.01	34.03
MH6	1088.64	-	11.69	1076.95	17.03
MH7	1089.29	-	12.20	1077.09	15.66
MH8	1089.23	-	11.41	1077.82	13.72
Wet Well	1098.86	-	21.85	1077.01	44.53

Notes:

- Not Applicable.

(1) Wells surveyed on August 24 and 29, 1995.

AMSL Above Measured Sea Level.

BTOR Below Top of Riser.

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	conductivity ($\mu\text{s/cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW4	05/20/97 05/20/97	10.0	10.0 Sample	1650 2000	2,960	6.49	10.6	>200	Red-brown, silty	Grundfos Pump/SS bailer for all parameters	Dry after 11 gallons
MW11	05/22/97 05/22/97	1.0	1.0 2.0 3.0 Sample	0916 0917 0918 1610	2,510 2,410 2,380	6.80 6.65 6.68	9.6 9.2 9.2	>200 >200 >200	Gray, silty Gray, silty Gray, silty Cloudy, light brown	Waterra/SS bailer for all parameters	Good recharge
MW101	05/20/97 05/20/97	2.5	2.5 5.0 Sample	0943 0946 1300	2,590 2,640	6.05 5.79	10.6 10.8	>200 >200	Brown, cloudy, silty Brown, cloudy, silty Clear, colorless	SS bailer/SS bailer for all parameters	Dry after two volumes
MW102	05/20/97 05/20/97	2.3	2.3 4.6 6.9 Sample	1033 1036 1042 1415	2,150 2,090 2,050	4.70 4.61 4.72	8.9 8.8 8.9	>200 >200 >200	Gray, silty Gray, very turbid Gray, very turbid Clear, colorless	SS bailer/SS bailer for all parameters	Good recharge
MW103	05/19/97 05/19/97	2.8	2.8 5.6 8.4 Sample	1745 1748 1750 1600	1,890 1,860 1,890	6.52 6.48 6.48	10.5 10.3 9.8	>200 >200 >200	Red/brown, cloudy, silty Red/brown, cloudy, silty Cloudy, gray Cloudy, gray/brown, silty	SS bailer/SS bailer for all parameters	Good recharge
MW104	05/21/97 05/21/97	1.1	1.1 2.2 3.3 Sample	0958 1000 1002 1530	2,840 2,660 2,640	5.93 5.92 5.85	8.9 9.0 8.8	>200 >200 >200	Gray, silty Gray, silty Gray, silty Cloudy, gray	SS Bailer/SS bailer for all parameters	Good recharge
MW105	05/21/97 05/21/97	0.7	0.7 1.4 2.1 Sample	1103 1104 1106 1600	3,410 3,380 3,370	5.66 5.48 5.57	11.7 11.7 11.6	>200 150 78	Brown, turbid Brown, turbid Brown, turbid Clear, colorless, some fine sediments	Waterra/SS bailer for all parameters	Good recharge
MW106	05/21/97 05/21/97	1.6	1.6 3.2 4.8 Sample	1137 1140 1142 1545	3,090 3,030 3,040	5.90 5.73 5.96	11.7 11.8 11.8	>200 98 66	brown, silty brown, silty brown, silty clear, colorless	SS Bailer/SS bailer for all parameters	Good recharge
MW107	05/21/97 05/21/97	1.3	1.3 2.6 3.9 Sample	1741 1743 1745 1700	4,130 4,160 4,180	6.20 6.13 6.16	11.3 11.2 11.2	50 60 24	Black tint with suspended solids Black tint with suspended solids Black tint with suspended solids Clear, colorless, strong sulfur odor	Waterra/SS bailer for all parameters	Good recharge

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW108	05/22/97	0.2	0.2	0932	2,890	6.71	10.1	>200	Cloudy, brown, silty	Waterra/SS bailer for all parameters	Good recharge
			0.4	0934	2,670	6.69	10.5	>200	Cloudy, brown, silty		
			0.6	0936	2,810	6.66	9.9	122	Cloudy, brown, silty		
			0.8	0938	3,170	6.73	10.2	149	Cloudy, brown, silty		
			1.0	0940	3,490	6.81	11.1	>200	Cloudy, brown, silty		
			Sample	1540					Slightly cloudy, gray		
MW109	05/20/97	1.0	1.0	1606	3,070	6.20	10.3	>200	Gray, silty	Waterra/SS bailer for all parameters	Dry after 3 gallons
			2.0	1608	3,070	6.22	8.7	>200	Gray, silty		
			3.0	1610	3,080	6.29	9.2	>200	Gray, silty		
	05/20/97		Sample	1900							
MW110	05/20/97	1.3	1.3	1705	750	6.98	8.8	45	Cloudy, light brown	Waterra/SS bailer for all parameters	Dry after 4 gallons
			2.6	1707	740	6.75	8.1	140	Cloudy, light brown		
	05/20/97		3.6	1709	740	6.84	8.3	120	Cloudy, light brown		
			Sample	2045					Clear, colorless		
MW111	05/22/97	1.0	1.0	0952	2,630	6.20	11.6	>200	Brown, turbid	Waterra/SS bailer for all parameters	Good recharge
			2.0	0954	2,640	6.12	11.3	>200	Brown, turbid		
			3.0	0959	2,680	6.08	11.3	>200	Brown, turbid		
	05/22/97		Sample	1700					Cloudy, light gray, some sediments		
MW113	05/21/97	1.2	1.2	1218	3,030	6.58	8.5	>200	Brown, turbid	Waterra/SS bailer for all parameters	Dry after 3.2 gallons
	05/21/97		2.4	1220	3,290	6.45	8.2	>200	Brown, turbid		
	05/21/97		Sample	1645							
MW114	05/19/97	1.2	1.2	1241	2,750	5.70	11.2	>200	Cloudy, dark red-brown	Waterra/SS bailer for all parameters	Dry after 3.1 gallons
			2.4	1243	2,810	5.47	11.6	132	Cloudy, dark red-brown		
	05/19/97		Sample	1545					Cloudy, dark red-brown		
MW115	05/19/97	3.0	3.0	1158	2,040	6.57	12.5	82	Slightly cloudy, light brown	SS bailer/SS bailer for all parameters	Good recharge
			6.0	1202	1,960	6.46	13.1	47	Slightly cloudy, light brown		
			9.0	1206	1,930	6.47	11.7	33	Slightly cloudy, light brown		
			12.0	1210	1,900	6.51	12.0	21	Clear, colorless		
			15.0	1214	1,880	6.47	12.1	16	Clear, colorless		
	05/19/97		Sample	1500					Clear, colorless		
MW116	05/19/97	0.3	0.3	1109	4,820	7.36	12.4	>200	Cloudy, light brown	SS bailer/SS bailer for all parameters	Minimal volume in well
			0.6	1113	4,720	7.22	12.9	>200	Cloudy, light brown		
	05/19/97		Sample	1430					Cloudy, light brown		

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW117	05/19/97	2.6	2.6	1131	2,690	6.31	13.1	101	Gray, silty	Waterra/SS bailer for all parameters	Good recharge
			5.2	1134	2,680	6.12	13.2	76	Gray, silty		
			7.8	1140	2,720	6.04	13.1	42	Clear, colorless		
MW118	05/20/97	1.9	1.9	1548	2,190	6.64	12.0	>200	Gray, silty	Waterra/SS bailer for all parameters	Good recharge
			3.8	1549	2,220	6.52	11.6	>200	Gray, silty		
			5.7	1551	2,220	6.50	11.6	>200	Gray, silty		
MW201	05/20/97	8.2	8.2	0919	3,830	7.65	12.1	115	Gray, slightly cloudy	Waterra/SS bailer for all parameters	Dry after 18.0 gallons
			16.4	0926	3,980	7.36	12.1	>200	Gray, cloudy		
			Sample	1315					Clear, colorless		
MW202	05/20/97	3.9	3.9	1037	1,600	7.84	10.5	>200	Gray, cloudy, silty	Waterra/SS bailer for all parameters	Good recharge
			7.8	1045	1,600	7.99	10.9	>200	Gray, cloudy, silty		
			11.7	1049	2,130	8.21	11.2	179	Gray, cloudy, silty		
			15.6	1054	2,180	8.23	11.6	>200	Gray, cloudy, silty		
			19.5	1059	2,220	8.28	11.5	>200	Gray, cloudy, silty		
MW203	05/21/97	6.7	6.7	1043	3,330	8.61	11.4	111	Gray, silty	Waterra/SS bailer for all parameters	Purged dry after two volumes, slow recharge
			13.4	1051	3,370	8.46	11.5	>200	Gray, silty		
			Sample	1500					Clear, colorless		
MW204	05/19/97	5.4	5.4	1257	3,180	7.24	13.0	45	Cloudy, brown, silty	Waterra/SS bailer for all parameters	Dry after 11.5 gallons
			10.8	1303	3,170	7.01	12.9	100	Cloudy, brown, silty		
			Sample	1600							
MW205	05/19/97	5.1	5.1	1645	3,490	5.89	13.1	10	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
			10.2	1651	3,490	5.79	13.2	14.6	Clear, colorless		
			15.3	1656	3,500	5.78	13.1	4	Clear, colorless		
MW206	05/21/97 05/22/97	5.3	5.1	1915					Slightly cloudy, red-brown	Waterra/SS bailer for all parameters	Purged dry after 8.5 gallons
			10.2								
			15.3								
MW207	05/22/97	4.8	4.8	1012	3,110	6.65	12.2	140	Brown, cloudy	Waterra/SS bailer for all parameters	Good recharge
			9.6	1019	3,070	6.73	12.0	166	Slightly cloudy, light brown		
			14.4	1028	3,000	6.63	11.9	105	Slightly cloudy, light brown		
	05/22/97	Sample	Sample	1640					Slightly cloudy, black tint		

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW209	05/20/97	4.3	4.3	1613	3,420	6.48	11.3	>200	Gray/brown, silty	Waterra/SS bailer for all parameters	Dry after 10.0 gallons
	05/20/97		8.6	1617	3,510	6.26	11.2	>200	Gray/brown, silty		
MW219	05/21/97	6.1	6.1	0927	2,540	8.22	11.6	84	Gray, slightly cloudy	Waterra/SS bailer for all parameters	Dry after 16.0 gallons
	05/21/97		12.2	0933	2,520	8.08	12.7	>200	Gray, cloudy		
MW220	05/20/97	4.6	4.6	1725	1,910	10.34	10.6	>200	Cloudy, brown	Waterra/SS bailer for all parameters	Purged dry after two volumes
	05/20/97		9.2	1730	2,100	9.89	11.2	>200	Cloudy, light brown		
MW223	05/22/97	4.0	4.0	1241	2,360	7.20	11.2	>200	Brown, silty	Waterra/SS bailer for all parameters	Dry after 13.5 gallons
			8.0	1244	2,410	6.90	10.4	>200	Brown, silty		
MW224	05/21/97	3.0	3.0	1249	2,800	6.63	10.7	>200	Brown, silty	Waterra/SS bailer for all parameters	Good recharge
	05/21/97		12.0	1620					Cloudy, brown, silty		
MW301	05/20/97	8.5	8.5	0908	3,280	7.71	12.9	29.0	clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all	Good recharge
			17.0	0910	3,250	7.25	13.1	118.0	clear, colorless		
MW302	05/20/97	8.5	8.5	0932	3,250	7.21	13.9	116.0	clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all	Dry after 12.5 gallons
	05/20/97		Sample	1745					clear, colorless		
MW303	05/21/97	6.7	6.7	1236	1,630	8.70	11.3	19	Slightly cloudy, gray	Waterra/SS bailer for all parameters	Dry after 13.4 gallons
	05/21/97		13.4	1530	3,200	8.21	12.4	59	Light gray, cloudy		
MW304	05/19/97	9.0	9.0	1539	3,510	7.97	12.0	11	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all	Purged dry after two volumes
	05/19/97		18.0	1541	3,390	7.98	13.0	150	Cloudy, gray		
			Sample	1830					Clear, colorless		

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW305	05/19/97	6.5	6.5	1722	3,230	6.67	13.1	79	Slightly cloudy, gray	Waterra/SS bailer for all parameters	Good recharge
			13.0	1727	3,170	6.71	13.2	27	Clear, colorless		
			19.5	1731	3,170	6.72	13.1	19	Clear, colorless		
MW306	05/22/97	10.1	10.1	0853	1,760	8.77	12.7	63	Cloudy, light gray	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Good recharge
			20.2	0858	1,590	8.74	12.6	48	Cloudy, light gray		
			30.3	0901	1,610	8.75	12.8	48	Slightly cloudy, light gray		
MW307	05/22/97	8.5	8.5	1022	2,490	8.57	11.8	>200	Clear, colorless	Waterra/SS bailer for all parameters	Purged dry after one volume
	05/22/97		Sample	1710	-	-	-	-	-		
MW309	05/20/97	7.5	7.5	1626	2,370	8.20	11.7	102	Slightly cloudy, light gray	Waterra/SS bailer	Dry after 13.0 gallons
	05/20/97		Sample	1930	-	-	-	-	Clear, colorless		
MW319	05/21/97	8.4	8.4	0944	2,790	9.34	12.4	86	Slightly cloudy, light gray	Waterra/SS bailer for all parameters	Dry after 11.0 gallons volumes
	05/21/97		Sample	1415	-	-	-	-	Clear		
MW320	05/20/97	12.9	12.9	1745	1,590	8.39	11.2	190	Cloudy, gray, silty	Waterra/SS bailer for all parameters	Dry after 15.0 gallons
	05/20/97		Sample	2100	-	-	-	-	Cloudy, light gray		
MW321	05/21/97	7.0	7.0	0844	2,300	8.57	10.9	149	Slightly cloudy, gray	Waterra/SS bailer for all parameters	Dry after 23 gallons
			14.0	0853	2,500	8.70	10.9	80	Cloudy, gray		
			21.0	0900	2,550	8.24	11.6	190	Cloudy, gray		
MW322	05/22/97	8.5	8.5	1220	3,130	9.18	12.0	41	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Dry after 12.0 gallons
	05/22/97		Sample	1730	-	-	-	-	Clear, colorless		
MW323	05/21/97	9.6	9.6	1643	1,970	8.30	11.5	68	Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 11.0 gallons
MW324	5/22/97	11.6	11.6	1815	-	-	-	-	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Dry after 13.0 gallons
	5/22/97		Sample	1300	2,480	9.33	12.2	33	Clear, colorless		

TABLE 2
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW401	05/22/97 05/22/97	69.3	69.3 Sample	1143 1720	2,000	8.57	13.2	120	Slightly cloudy, light brown, silty Slightly cloudy, light brown	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Dry after 90.0 gallons
MW402	05/21/97 05/21/97	63.6	63.6 Sample	1622 1800	2,010	8.69	12.5	186	Cloudy, light red-brown, silty Slightly cloudy, brown	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after one volume
MW414	05/19/97 05/19/97	51.1	51.1 Sample	1620 1845	2,670	8.74	13.0	136	Cloudy, black Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Dry after 55.0 gallons
MW415	05/19/97 05/19/97	39.7	38.0 Sample	1225 1515	2,210	9.31	13.2	52	Cloudy, black Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after one volume
MW420	05/22/97 05/23/97	63.3	60.0 Sample	1310 0730	5,060	12.08	12.1	22 13.2	Cloudy, brown Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after one volume
MW421	05/20/97 05/20/97	49.0 98.0 147.0	49.0 98.0 147.0 Sample	1148 1204 1213 1445	2,310 2,300 2,220	7.89 7.79 7.79	11.9 12.0 12.0 >200	63 68 Cloudy, gray Cloudy, gray Cloudy, gray Slightly cloudy, gray	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Good recharge	
MW422	05/20/97 05/20/97	60.0	50.0 Sample	0836 1345	4,260	9.14	12.8	100	Cloudy, black Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after <one volume

Notes:

SS Bailer - Stainless Steel Bailer.

TABLE 3
SAMPLE KEY
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
MAY 1997

<i>Sample I.D.</i>	<i>Well No.</i>	<i>Date Sampled</i>	<i>Chain of Custody</i>	<i>Time</i>	<i>Comments</i>
GW-6029-051997-001	MW116	05/19/97	1237	1430	
GW-6029-051997-002	MW117	05/19/97	1237	1445	
GW-6029-051997-003	MW115	05/19/97	1237	1500	
GW-6029-051997-004	MW415	05/19/97	1237	1515	
GW-6029-051997-005	MW415	05/19/97	1237	1530	Blind Duplicate
GW-6029-051997-006	MW114	05/19/97	1237	1545	
GW-6029-051997-007	MW204	05/19/97	1237	1600	
RB-6029-051997-008	-	05/19/97	1237	1615	Rinse Blank ⁽¹⁾
GW-6029-051997-009	MW304	05/19/97	1237	1830	
GW-6029-051997-010	MW414	05/19/97	1237	1845	
GW-6029-051997-011	MW103	05/19/97	1237	1900	MS/MSD
GW-6029-051997-012	MW205	05/19/97	1237	1915	
GW-6029-051997-013	MW305	05/19/97	1237	1930	
GW-6029-052097-014	MW101	05/20/97	3243	1300	
GW-6029-052097-015	MW201	05/20/97	3243	1315	
GW-6029-052097-016	MW301	05/20/97	3243	1330	
GW-6029-052097-017	MW422	05/20/97	3243	1345	
GW-6029-052097-018	MW102	05/20/97	3243	1415	
RB-6029-052097-019	-	05/20/97	3243	1430	Rinse Blank ⁽²⁾
GW-6029-052097-020	MW421	05/20/97	3243	1445	
GW-6029-052097-021	MW202	05/20/97	3243	1500	
GW-6029-052097-022	MW202	05/20/97	3243	1515	Blind Duplicate
GW-6029-052097-023	MW302	05/20/97	3243	1530	
GW-6029-052097-024	MW118	05/20/97	3243	1845	
GW-6029-052097-025	MW109	05/20/97	3243	1900	
GW-6029-052097-026	MW209	05/20/97	3243	1915	
GW-6029-052097-027	MW309	05/20/97	3243	1930	
GW-6029-052097-028	MW309	05/20/97	3243	1945	Blind Duplicate
GW-6029-052097-029	MW4	05/20/97	3243	2000	
RB-6029-052097-030	-	05/20/97	3243	2015	Rinse Blank ⁽³⁾
GW-6029-052097-031	MW220	05/20/97	1242	2030	
GW-6029-052097-032	MW110	05/20/97	1242	2045	MS/MSD
GW-6029-052097-033	MW320	05/20/97	1242	2100	
GW-6029-052197-034	Potable Well	05/21/97	1242	730	
GW-6029-052197-035	MW321	05/21/97	3183	1400	
GW-6029-052197-036	MW319	05/21/97	3183	1415	
GW-6029-052197-037	MW219	05/21/97	3183	1430	
GW-6029-052197-038	MW219	05/21/97	3183	1445	Blind Duplicate
GW-6029-052197-039	MW203	05/21/97	3183	1500	
GW-6029-052197-040	MW303	05/21/97	3183	1515	
GW-6029-052197-041	MW104	05/21/97	3183	1530	
GW-6029-052197-042	MW106	05/21/97	3183	1545	

TABLE 3
SAMPLE KEY
SIXTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
MAY 1997

<i>Sample I.D.</i>	<i>Well No.</i>	<i>Date Sampled</i>	<i>Chain of Custody</i>	<i>Time</i>	<i>Comments</i>
RB-6029-052197-043	-	05/21/97	3183	1545	Rinse Blank ⁽⁴⁾
GW-6029-052197-044	MW105	05/21/97	3183	1600	
GW-6029-052297-045	MW206	05/22/97	3183	0800	
GW-6029-052197-046	MW224	05/21/97	3183	1630	
GW-6029-052197-047	MW113	05/21/97	3183	1645	
GW-6029-052197-048	MW107	05/21/97	3183	1700	
GW-6029-052197-049	MW402	05/21/97	3183	1800	
GW-6029-052197-050	MW323	05/21/97	3183	1815	
SW-6029-052197-051	Surface Water	05/21/97	3239	1830 ⁽⁵⁾	MS/MSD
SW-6029-052197-052	Surface Water	05/21/97	3239	1845	Blind Duplicate of 051
FB-6029-052197-053	-	05/21/97	3239	1830	Field Blank ⁽⁶⁾
S-6029-052197-054	Sediments	05/21/97	3239	1900	(5)
S-6029-052197-055	Sediments	05/21/97	3239	1915	Blind Duplicate of 054
GW-6029-052297-056	MW111	05/22/97	1241	1530	
GW-6029-052297-057	MW108	05/22/97	1241	1540	
GW-6029-052297-058	MW108	05/22/97	1241	1550	Blind Duplicate
GW-6029-052297-059	MW324	05/22/97	1241	1600	
GW-6029-052297-060	MW11	05/22/97	1241	1610	
GW-6029-052297-061	MW223	05/22/97	1241	1620	
RB-6029-052297-062	-	05/22/97	1241	1615	Rinse Blank ⁽⁷⁾
GW-6029-052297-063	MW306	05/22/97	1241	1630	
GW-6029-052297-064	MW207	05/22/97	1241	1640	
GW-6029-052297-065	MW207	05/22/97	1241	1650	Blind Duplicate
GW-6029-052397-066	MW420	05/23/97	1241	0730	
GW-6029-052297-067	MW307	05/22/97	1241	1710	
GW-6029-052297-068	MW401	05/22/97	1241	1720	
GW-6029-052297-069	MW322	05/22/97	1241	1730	MS/MSD
RB-6029-052297-070	-	05/22/97	1241	1700	Rinse Blank ⁽⁸⁾

Notes:

- (1) Blanked bailer used to sample MW304.
- (2) Blanked bailer used to sample MW302.
- (3) Blanked bailer used to sample MW220.
- (4) Blanked bailer used to sample MW105
- (5) Taken at the confluence of the south and east drainage ditches.
- (6) Field blank poured at surface water sample location.
- (7) Blanked bailer used to sample MW111.
- (8) Blanked bailer used to sample MW420.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate.

TABLE 4
SUMMARY OF MONITORING WELL REDEVELOPMENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Date</i>	<i>Beginning Water Level</i>	<i>Time</i>	<i>Volume Purged</i>	<i>pH</i>
MW322 - One Well Volume 8.5 Gallons				
05/19/97	16.98	1025	11.0	12.14
05/19/97	22.29	1956	11.0	10.68
05/20/97	19.90	0715	9.0	9.73
05/20/97	19.42	2015	12.0	9.38
05/21/97	19.24	0824	11.0	9.21
05/21/97	20.68	1852	16.0	8.74
05/22/97	19.15	0712	11.0	9.24
05/22/97	30.51	1220	6.0	9.18
MW324 - One Well Volume 11.6 Gallons				
05/19/97	17.62	1055	16.0	10.86
05/19/97	38.20	2013	12.0	10.42
05/20/97	44.55	0725	11.0	9.68
05/20/97	43.48	2031	12.0	9.54
05/21/97	46.91	0830	11.0	9.41
05/21/97	49.68	1902	10.0	8.99
05/22/97	47.88	0727	10.5	9.55
05/22/97	64.35	1300	6.0	9.33
MW420 - One Well Volume 63.3 Gallons				
05/19/97	24.60	1003	60.0	12.43
05/19/97	104.55	1949	10.0	12.32
05/20/97	108.78	0705	6.0	12.03
05/20/97	109.80	1800	6.0	12.17
05/21/97	107.35	0809	7.0	12.10
05/21/97	109.98	1838	6.0	12.00
05/22/97	108.95	0703	5.0	12.10
05/22/97	112.92	1310	3.0	12.08

ATTACHMENT A

CHAIN OF CUSTODY RECORDS

CHAIN OF CUSTODY RECORD

Treatek - CRA™ COMPANY

2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-2160

SAMPLER'S SIGNATURE: *David Tyson*

PRINTED NAME: *David Tyson*

SEQ. No. DATE TIME SAMPLE No.

SAMPLE TYPE

NO. OF CONTAINERS

PARAMETERS

REMARKS

SHIPPED TO (Laboratory Name): *Accutest Labs*

REFERENCE NUMBER: 6029-50

Summit National - CW

Sampling Round 6

5/19/97 1430 CW-6029-05/19/97-001 water 4 3 1 1 1 1 1 1

1445 CW-6029-05/19/97-002 water 4 3 1 1 1 1 1 1

1500 CW-6029-05/19/97-003 water 4 3 1 1 1 1 1 1

1515 CW-6029-05/19/97-004 water 4 3 1 1 1 1 1 1

1530 CW-6029-05/19/97-005 water 4 3 1 1 1 1 1 1

1545 CW-6029-05/19/97-006 water 4 3 1 1 1 1 1 1

1600 CW-6029-05/19/97-007 water 4 3 1 1 1 1 1 1

1613 RS-6029-05/19/97-008 Lab water 4 3 1 1 1 1 1 1

1830 CW-6029-05/19/97-009 water 4 3 1 1 1 1 1 1

1845 CW-6029-05/19/97-010 water 4 3 1 1 1 1 1 1

1900 CW-6029-05/19/97-011 water 4 3 1 1 1 1 1 1

1915 CW-6029-05/19/97-012 water 4 3 1 1 1 1 1 1

1930 CW-6029-05/19/97-013 water 4 3 1 1 1 1 1 1

TRIP BLANK lab water as a duplicate taken for Sample - OIL

TOTAL NUMBER OF CONTAINERS

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY: *David J Tyson* DATE: 5/20/97 RECEIVED BY: *②*

RELINQUISHED BY: *David J Tyson* DATE: *③* RECEIVED BY: *④*

RELINQUISHED BY: *①* DATE: *②* RECEIVED BY: *③*

RELINQUISHED BY: *③* DATE: *④* RECEIVED BY: *⑤*

METHOD OF SHIPMENT: *FCL EX* WAY BILL No. 9090948090

WHITE -Fully Executed Copy
YELLOW -Receiving Laboratory Copy
PINK -Shipper Copy
GOLDENROD -Sampler Copy

SAMPLE TEAM:

RECEIVED FOR LABORATORY BY:

NO NF-1237

D. Tyson

DATE: _____ TIME: _____

J. Kinder Linden

DATE: _____ TIME: _____

CRA

CONESTOGA - ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SAMPLER'S SIGNATURE: David Tyner PRINTED NAME: David Tyner

SHIPPED TO (Laboratory Name): **Accufest Labs**
REFERENCE NUMBER: 6049-58

Summit National Gw
Sampling Round 6.

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS			REMARKS
						TDS	pH	TEMP	
5-20-97 1300			Gw - 6029 - 052097 - 014	water	4	3	1		
1315			Gw - 6029 - 052097 - 015	water	4	3	1		
1330			Gw - 6029 - 052097 - 016	water	4	3	1		
1345			Gw - 6029 - 052097 - 017	water	4	3	1		
1415			Gw - 6029 - 052097 - 018	water	4	3	1		
1430			RB - 6029 - 052097 - 019	Lab water	3	2	1		
1445			Gw - 6029 - 052097 - 020	water	4	3	1		
1500			Gw - 6029 - 052097 - 021	water	4	3	1		
1515			Gw - 6029 - 052097 - 022	water	4	3	1		
1530			Gw - 6029 - 052097 - 023	water	4	3	1		
1845			Gw - 6029 - 052097 - 024	water	4	3	1		
1900			Gw - 6029 - 052097 - 025	water	4	3	1		
1915			Gw - 6029 - 052097 - 026	water	4	3	1		
1930			Gw - 6029 - 052097 - 027	water	4	3	1		
1945			Gw - 6029 - 052097 - 028	water	4	3	1		
2000			Gw - 6029 - 052097 - 029	water	4	3	1		
2015			RB - 6029 - 052097 - 030	Lab water	3	2	1		
TOTAL NUMBER OF CONTAINERS				66	HEALTH/CHEMICAL HAZARDS				
① RELINQUISHED BY:	<u>David Tyner</u>		DATE: 5-21-97	RECEIVED BY:	②	DATE:			
② RELINQUISHED BY:			TIME: 08:30			TIME:			
③ RELINQUISHED BY:			DATE:	RECEIVED BY:	③	DATE:			
④ RELINQUISHED BY:			TIME:	RECEIVED BY:	④	DATE:			
METHOD OF SHIPMENT: <u>Fed Ex</u> WAY BILL No. 7974936244									
White	-Fully Executed Copy	SAMPLE TEAM:	RECEIVED FOR LABORATORY BY:						
Yellow	-Receiving Laboratory Copy	D. Tyner							
Pink	-Shipper Copy	J. Kinderkinder							
Goldernrod	-Sampler Copy		DATE:						
			TIME:						

TreatTek - CRA™ COMPANY

2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-2160

SAMPLER'S
SIGNATURE:

David Tyner

PRINTED
NAME: David Tyner

Accufest
Labs

SHIPPED TO (Laboratory Name):

REFERENCE NUMBER: 6029-50
Summit National - GW
Sampling Room 6

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	OF CONTAINERS NO.	PARAMETERS	REMARKS
5-81-97	2030		GW-6029-05297-031	water	4	3	1
④	2045		GW-6029-05297-032		12	4	3
②	2100		GW-6029-05297-033		4	3	1
5-81-97	0730		GW-6029-05297-034	TRIP BLANK	7	3	2
				hot water	3	2	2

Matrix spike and matrix spike duplicate volume taken for sample - 032

RELINQUISHED BY:	DATE:	TIME:	TOTAL NUMBER OF CONTAINERS	TYPE	AMOUNT	HEALTH/CHEMICAL HAZARDS
① <i>David Tyner</i>	5-81-97	RECEIVED BY: ②				
RELINQUISHED BY:	DATE:	TIME:				
②		RECEIVED BY: ③				
RELINQUISHED BY:	DATE:	RECEIVED BY: ④				
③		DATE:				
		TIME:				

METHOD OF SHIPMENT: *FEDEX*

WAY BILL No. 7974936244

SAMPLE TEAM: *D. Tyner*

RECEIVED FOR LABORATORY BY:

Nº NF - 1242

White	-Fully Executed Copy
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Pink	-Shipper Copy
Goldendrod	-Sampler Copy

J. Vandekindere

RECEIVED BY:
DATE: _____ TIME: _____

CRA

CONESTOGA - ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SAMPLER'S SIGNATURE: David Tyran PRINTED NAME: David Tyran

SHIPPED TO (Laboratory Name): Accutest Labs

REFERENCE NUMBER: 6029-50
Summit National - Gru

Sampling Rain/G

SEQ. NO.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS	REMARKS
62197	1400		Gru-6029-052197-035	water	4 3	4	
1415			Gru-6029-052197-036		4 3	1	
1430			Gru-6029-052197-037		4 3	1	
1445			Gru-6029-052197-038		4 3	1	
1500			Gru-6029-052197-039		4 3	1	
1515			Gru-6029-052197-040		4 3	1	
1530			Gru-6029-052197-041		3 2	1	
1545			Gru-6029-052197-042		4 3	1	
1560			RB-6029-052197-043	Lab water	3 2	1	
1575	0800		Gru-6029-052197-044	water	4 3	1	
1597	1630		Gru-6029-052197-045		4 3	1	
1615			Gru-6029-052197-046		4 3	1	
1700			Gru-6029-052197-047		4 3	1	
1800			Gru-6029-052197-048		4 3	1	
1845			Gru-6029-052197-049		4 3	1	
			Gru-6029-052197-050		4 3	1	
TOTAL NUMBER OF CONTAINERS			62	HEALTH/CHEMICAL HAZARDS			

RELINQUISHED BY: David Tyran

DATE: 5-30-97 TIME: 0900 RECEIVED BY: DATE: TIME:

RELINQUISHED BY:

DATE: TIME: RECEIVED BY: DATE: TIME:

RELINQUISHED BY:

DATE: TIME: RECEIVED BY: DATE: TIME:

METHOD OF SHIPMENT: Fed Ex

WAY BILL No. 7974937894

White -Fully Executed Copy
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Goldendrod -Sampler Copy

SAMPLE TEAM: D. Tyran

RECEIVED FOR LABORATORY BY:

N# NF- 3183

White -Fully Executed Copy
Yellow -Receiving Laboratory Copy
Pink -Shipper Copy
Goldendrod -Sampler Copy

SAMPLE TEAM: J. Winkler Linden

RECEIVED FOR LABORATORY BY:

N# NF- 3183

CRA

CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SAMPLER'S SIGNATURE: David Tyran PRINTED NAME: David Tyran

Accutest Labs

CHAIN' UF LUSTUW' RECDKU

SHIPPED TO (Laboratory Name):

REFERENCE NUMBER:

6029-50

Summit National - Gru

Sampling Round

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS		REMARKS
						Temp	pH	
5-21-97	1830		SW 6029-05A197-051	water	21	9	6	
	1845		SW 6029-05A197-052	water	7	3	3	
	1850		FB-6029-05A197-053	Lab water	7	3	2	
	1900		S-6029-05A197-054	Sediment	2			
	1915		S-6029-05A197-055	water	2		2	

TRIP BLANK Lab water 2 2

TOTAL No. of CONTAINERS

18 1

62

163 HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:	<u>David Tyran</u>	DATE: 5-22-97	RECEIVED BY:	DATE:
①		TIME: 0700	②	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
②		TIME:	③	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
③		TIME:	④	TIME:

METHOD OF SHIPMENT: Fed Ex

WAY BILL No. K174937294

White	-Fully Executed Copy
Yellow	-Receiving Laboratory Copy
Pink	-Shipper Copy
Goldendrod	-Sampler Copy

SAMPLE TEAM:
D. Tyran

RECEIVED FOR LABORATORY BY:
J. Kinderdinken

DATE: _____ TIME: _____
NO. NF - 1234

CH.N.C. CUSTODY LOGO

Treatek - CRA™ COMPANY

 2055 Niagara Falls Blvd. Suite Three
 Niagara Falls, NY 14304 (716)297-2160

SHIPPED TO (Laboratory Name):

Accutest Lcbs

REFERENCE NUMBER: 6029-50

Summit National - 9w
Sampling Round 6SAMPLER'S
SIGNATURE:*Dave Tyran*

PRINTED

NAME: David Tyran

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS		REMARKS
						INC. SPOKE	THREE 4/16/2003	
5-22-97	1530		GW-6029-052297-056	water	4	3	1	
	1540		GW-6029-052297-057		4	3	1	
	1550		GW-6029-052297-058		4	3	1	
	1600		GW-6029-052297-059		4	3	1	
	1610		GW-6029-052297-060		4	3	1	
	1620		GW-6029-052297-061		4	3	1	
	1635		RB-6029-052297-062	Lab water	3	2	1	
	1630		GW-6029-052297-063	water	4	3	1	
	1640		GW-6029-052297-064		4	3	1	
	1650		GW-6029-052297-065		4	3	1	
5-23-97	0730		GW-6029-052397-066		4	3	1	
5-22-97	1710		GW-6029-052297-067		4	3	1	
	1720		GW-6029-052297-068		4	3	1	
	1730		GW-6029-052297-069		12	9	3	
	1700		RB-6029-052297-070	Lab water	3	2	1	
			TRIP BLANK		2	2		

TOTAL NUMBER OF CONTAINERS

68

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:	<i>David J. Tyran</i>	DATE: 5-23-97	RECEIVED BY:	DATE:
①		TIME: 0900	②	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
②		TIME:	③	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
③		TIME:	④	TIME:

METHOD OF SHIPMENT: Fed Ex

WAY BILL No. 7974936255

White	-Fully Executed Copy	SAMPLE TEAM:	RECEIVED FOR LABORATORY BY:
Yellow	-Receiving Laboratory Copy	<i>D. Tyran</i>	
Pink	-Shipper Copy		
Goldenrod	-Sampler Copy	<i>J. KanderLinden</i>	DATE: _____ TIME: _____

No NF- 1241

ATTACHMENT B

ANALYTICAL RESULTS

Table 1

Page 1

Date Printed: July 23, 1997

Time Printed: 9:23 am

Summit National Site
Summary of Groundwater Data

<i>Location:</i>	MW4	MW11	MW101	MW102	MW103	MW104	MW105	MW106
<i>Sample ID:</i>	GW-029	GW-060	GW-014	GW-018	GW-011	GW-041	GW-044	GW-042
<i>Date Sampled</i>	05/20/97	05/22/97	05/20/97	05/20/97	05/19/97	05/21/97	05/21/97	05/21/97

<u>Parameters</u>	<u>Units</u>							
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	ND(0.89)	74.1	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	3.0	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	34.3	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)	26.1	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)						
Inorganic Compounds								
Cadmium, total	ug/l	ND(4)						
Lead, Total	ug/l	3.5	5.2	4.6	3.5	13.4 J	3	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	62.6	81.7	ND(40)	ND(40)	40.8 ND(40)

1,1-Dichloroethane	ug/l	ND(0.89)	74.1	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	3.0	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	34.3	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)	26.1	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)						

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	3.5	5.2	4.6	3.5	13.4 J	3	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	62.6	81.7	ND(40)	ND(40)	40.8 ND(40)

Table 1

**Summit National Site
Summary of Groundwater Data**

Page 2

Date Printed: July 23, 1997

Time Printed: 9:23 am

Location:Sample ID:Date Sampled

	MW107 GW-048 05/21/97	MW108 GW-057 05/22/97	MW108 GW-058 05/22/97	MW109 GW-025 05/20/97	MW110 GW-032 05/20/97	MW111 GW-056 05/22/97	MW113 GW-047 05/21/97	MW114 GW-006 05/19/97
--	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------	-----------------------------

ParametersUnitsVolatile Organic Compounds

1,1-Dichloroethane	ug/l	738	17.3	21.6	ND(0.89)	ND(0.89)	7.3	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(42)	10.3	12.0	ND(0.83)	ND(0.83)	69.3	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(46)	8.2	10.4	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	7730	ND(0.62)						
Acetone	ug/l	9380	ND(0.92)						
Ethylbenzene	ug/l	134	ND(0.76)						
Toluene	ug/l	1760	ND(0.38)						
Trichloroethene	ug/l	ND(27)	3.1	3.8	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	408	ND(1)						

Inorganic Compounds

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	ND(3)	4.3	ND(3)	5.2	ND(3)	ND(3)	4.7	ND(4)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	43.5	ND(40)	ND(40)	5.8	ND(40)

Table 1

Page 3

Date Printed: July 23, 1997

Time Printed: 9:23 am

Summit National Site
Summary of Groundwater Data

<u>Location:</u>	MW115	MW116	MW117	MW118	MW201	MW202	MW202	MW203
<u>Sample ID:</u>	GW-003	GW-001	GW-002	GW-024	GW-015	GW-021	GW-022	GW-039
<u>Date Sampled</u>	05/19/97	05/19/97	05/19/97	05/20/97	05/20/97	05/20/97	05/20/97	05/21/97
Dupl.								
<u>Parameters</u>	<u>Units</u>							
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	2.7	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)						
1,2-Dichloroethene, total	ug/l	7.6	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone {methyl ethyl ketone}	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)						
Xylenes, total	ug/l	ND(1)						
Inorganic Compounds								
Cadmium, total	ug/l	ND(4)						
Lead, Total	ug/l	ND(3)	10.2	3.4	3.4	ND(3)	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	49.6	ND(40)	ND(40)	ND(40)	ND(40)

Table 1

Page 4

Date Printed: July 23, 1997

Time Printed: 9:23 am

Summit National Site
Summary of Groundwater Data

<u>Location:</u>	MW204	MW205	MW206	MW207	MW207	MW209	MW219	MW219
<u>Sample ID:</u>	GW-007	GW-012	GW-045	GW-064	GW-065	GW-026	GW-037	GW-038
<u>Date Sampled</u>	05/19/97	05/19/97	05/22/97	05/22/97	05/22/97	05/20/97	05/21/97	05/21/97
<u>Parameters</u>								Dupl.
<u>Units</u>								Dupl.
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	ND(0.89)						
1,2-Dichloroethane	ug/l	ND(0.83)						
1,2-Dichloroethene, total	ug/l	ND(0.92)						
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)						
Xylenes, total	ug/l	ND(1)						
Inorganic Compounds								
Cadmium, total	ug/l	ND(4)						
Lead, Total	ug/l	7	4.8	ND(3)	ND(3)	ND(3)	5	ND(3)
Nickel, total	ug/l	ND(40)						

Table 1
Summit National Site
Summary of Groundwater Data

Page 5
Date Printed: July 23, 1997
Time Printed: 9:23 am

<u>Location:</u>	MW220	MW223	MW224	MW301	MW302	MW303	MW304	MW305
<u>Sample ID:</u>	GW-031	GW-061	GW-046	GW-016	GW-023	GW-040	GW-009	GW-013
<u>Date Sampled</u>	05/20/97	05/22/97	05/21/97	05/20/97	05/20/97	05/21/97	05/19/97	05/19/97
<u>Parameters</u>								
<u>Volatile Organic Compounds</u>		<u>Units</u>						
1,1-Dichloroethane	ug/l	ND(0.89)	3.3	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	6.2	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	3.8	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
Ace ^t one	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
Ethy ^b enzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
<u>Inorganic Compounds</u>								
Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	7.2	ND(3)	ND(3)	ND(3)	6.5	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)

Table 1

Page 6

Date Printed: July 23, 1997

Time Printed: 9:23 am

Summit National Site
Summary of Groundwater Data

<u>Location:</u>	MW306	MW307	MW309	MW309	MW319	MW320	MW321	MW322
<u>Sample ID:</u>	GW-063	GW-067	GW-027	GW-028	GW-036	GW-033	GW-035	GW-069
<u>Date Sampled</u>	05/22/97	05/22/97	05/20/97	05/20/97	05/21/97	05/20/97	05/21/97	05/22/97
				Dupl.				
<u>Parameters</u>	<u>Units</u>							
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	ND(0.89)						
1,2-Dichloroethane	ug/l	ND(0.83)						
1,2-Dichloroethene, total	ug/l	ND(0.92)						
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)						
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	1.1	ND(1)	ND(1)
Inorganic Compounds								
Cadmium, total	ug/l	ND(4)						
Lead, Total	ug/l	ND(3)						
Nickel, total	ug/l	ND(40)						

Table 1

Summit National Site
Summary of Groundwater Data

Page 7
 Date Printed: July 23, 1997
 Time Printed: 9:23 am

<u>Location:</u>	MW323	MW324	MW401	MW402	MW414	MW415	MW415	MW420
<u>Sample ID:</u>	GW-050	GW-059	GW-068	GW-049	GW-010	GW-004	GW-005	GW-066
<u>Date Sampled</u>	05/21/97	05/22/97	05/22/97	05/21/97	05/19/97	05/19/97	05/19/97	05/23/97
<u>Parameters</u>								Dupl.
<u>Units</u>								
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	ND(0.89)						
1,2-Dichloroethane	ug/l	ND(0.83)						
1,2-Dichloroethene, total	ug/l	ND(0.92)						
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)						
Acetone	ug/l	ND(0.92)						
Ethylbenzene	ug/l	ND(0.76)						
Toluene	ug/l	ND(0.38)						
Trichloroethene	ug/l	ND(0.54)						
Xylenes, total	ug/l	ND(1)						
Inorganic Compounds								
Cadmium, total	ug/l	ND(4)						
Lead, Total	ug/l	ND(3)						
Nickel, total	ug/l	ND(40)	ND(40)	49.5	ND(40)	ND(40)	ND(40)	ND(40)

Table 1

Summit National Site
Summary of Groundwater Data

Page 8
 Date Printed: July 23, 1997
 Time Printed: 9:23 am

<i>Location:</i>	MW421	MW422
<i>Sample ID:</i>	GW-020	GW-017
<i>Date Sampled</i>	<u>05/20/97</u>	<u>05/20/97</u>

<u>Parameters</u>	<u>Units</u>		
Volatile Organic Compounds			
1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)
Ethybenzene	ug/l	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)
Inorganic Compounds			
Cadmium, total	ug/l	ND(4)	ND(4)
Lead, Total	ug/l	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)

1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)
Ethybenzene	ug/l	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)

Cadmium, total	ug/l	ND(4)	ND(4)
Lead, Total	ug/l	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)

Notes

- | | |
|------|--|
| NS | - Not analyzed. |
| ND() | - Not detected at quantitation limit listed in parentheses. |
| U | - The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit. |
| J | - The associated numerical value is an estimated quantity. |
| B | - Analyte was detected in laboratory blank. |
| D | - Result was obtained from analysis performed at a secondary dilution. |
| E | - Reported result was estimated due to exceedance of linear calibration range of the instrument. |
| R | - Data is unusable. Compound may or may not be present. |
| X | - The result fell between the reporting limit and the detection limit of the compound. |

Table 4

Page 1 (a)

Summit National Site
Summary of Ground Water Data

Time Printed: 9:29 am

*Location:**Sample ID:**Sample Date:*

Field Blank 1

FB-053

05/21/97

ParametersUnitsVolatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)
Acetone	ug/l	ND(0.92)
Ethylbenzene	ug/l	ND(0.76)
Toluene	ug/l	ND(0.38)
Trichloroethene	ug/l	ND(0.54)
Xylenes, total	ug/l	ND(1)

Acid Extractables

2,4,5-Trichlorophenol	ug/l	ND(1.5)
2,4,6-Trichlorophenol	ug/l	ND(1)
2,4-Dichlorophenol	ug/l	ND(1.8)
2,4-Dimethylphenol	ug/l	ND(2.8)
2,4-Dinitrophenol	ug/l	ND(1.3)
2-Chlorophenol	ug/l	ND(1.7)
2-Methylphenol [o-cresol]	ug/l	ND(1.7)
2-Nitrophenol	ug/l	ND(2.4)
4,6-Dinitro-2-methylphenol	ug/l	ND(1.1)
4-Chloro-3-methylphenol	ug/l	ND(1.2)
4-Nitrophenol	ug/l	ND(0.77)
Pentachlorophenol	ug/l	ND(1.2)
Phenol	ug/l	ND(0.67)

Base/Neutral Extractables

1,2,4-Trichlorobenzene	ug/l	ND(1.6)
1,2-Dichlorobenzene	ug/l	ND(1.1)
1,3-Dichlorobenzene	ug/l	ND(1.5)
1,4-Dichlorobenzene	ug/l	ND(1.5)
2,4-Dinitrotoluene	ug/l	ND(0.95)
2,6-Dinitrotoluene	ug/l	ND(1)
2-Chloronaphthalene	ug/l	ND(1.2)
2-Methylnaphthalene	ug/l	ND(2)
2-Nitroaniline	ug/l	ND(0.85)
3&4-Methylphenol	ug/l	ND(2.4)
3,3'-Dichlorobenzidine	ug/l	ND(1.6)
3-Nitroaniline	ug/l	ND(0.8)

Table 4

Page 1 (b)

Time Printed: 9:29 am

Summit National Site
Summary of Ground Water Data

Location:

Field Blank 1

Sample ID:

FB-053

Sample Date:

05/21/97

ParametersUnitsBase/Neutral Extractables (Cont'd)

4-Bromophenyl phenyl ether	ug/l	ND(1.8)
4-Chloroaniline	ug/l	ND(1.6)
4-Chlorophenyl phenyl ether	ug/l	ND(1)
4-Nitroaniline	ug/l	ND(0.43)
Acenaphthene	ug/l	ND(1.1)
Acenaphthylene	ug/l	ND(1.2)
Anthracene	ug/l	ND(1.6)
Benzo(a)anthracene	ug/l	ND(1.2)
Benzo(a)pyrene	ug/l	ND(1.2)
Benzo(b)fluoranthene	ug/l	ND(2.5)
Benzo(g,h,i)perylene	ug/l	ND(1.5)
Benzo(k)fluoranthene	ug/l	ND(1.8)
Benzyl butyl phthalate	ug/l	ND(2.1)
Bis(2-chloroethoxy)methane	ug/l	ND(1.6)
Bis(2-chloroethyl)ether	ug/l	ND(1.2)
Bis(2-chloroisopropyl)ether	ug/l	ND(1.3)
Bis(2-ethylhexyl)phthalate	ug/l	ND(2.1)
Carbazole	ug/l	ND(2)
Chrysene	ug/l	ND(0.83)
Di-n-butyl phthalate	ug/l	ND(2.2)
Di-n-octyl phthalate	ug/l	ND(1.6)
Dibenz(a,h)anthracene	ug/l	ND(1.4)
Dibenzofuran	ug/l	ND(1.3)
Diethyl phthalate	ug/l	ND(2.7)
Dimethyl phthalate	ug/l	ND(3)
Fluoranthene	ug/l	ND(1.3)
Fluorene	ug/l	ND(1.2)
Hexachlorobenzene	ug/l	ND(1.9)
Hexachlorobutadiene	ug/l	ND(1.5)
Hexachlorocyclopentadiene	ug/l	ND(0.62)
Hexachloroethane	ug/l	ND(1.1)
Indeno(1,2,3-cd)pyrene	ug/l	ND(1.7)
Isophorone	ug/l	ND(1.4)
N-Nitrosodiphenylamine	ug/l	ND(2)
N-Nitrosodipropylamine	ug/l	ND(1.6)
Naphthalene	ug/l	ND(1.6)
Nitrobenzene	ug/l	ND(1.3)
Phenanthrene	ug/l	ND(2.1)
Pyrene	ug/l	ND(1.6)

Table 4

Page 1 (c)

Summit National Site
Summary of Ground Water Data

Time Printed: 9:29 am

Location: Field Blank 1
Sample ID: FB-053
Sample Date: 05/21/97

Parameters

Units

Pesticides

4,4'-DDD	ug/l	ND(0.033)
4,4'-DDE	ug/l	ND(0.023)
4,4'-DDT	ug/l	ND(0.025)
Aldrin	ug/l	ND(0.022)
alpha-BHC	ug/l	ND(0.015)
alpha-Chlordane	ug/l	ND(0.022)
beta-BHC	ug/l	ND(0.019)
delta-BHC	ug/l	ND(0.016)
Dieldrin	ug/l	ND(0.021)
Endosulfan I	ug/l	ND(0.023)
Endosulfan II	ug/l	ND(0.024)
Endosulfan Sulfate	ug/l	ND(0.046)
Endrin	ug/l	ND(0.027)
Endrin aldehyde	ug/l	ND(0.032)
Endrin ketone	ug/l	ND(0.03)
gamma-BHC [lindane]	ug/l	ND(0.017)
gamma-Chlordane	ug/l	ND(0.02)
Heptachlor	ug/l	ND(0.018)
Heptachlor Epoxide	ug/l	ND(0.021)
Methoxychlor	ug/l	ND(0.022)
Toxaphene	ug/l	ND(0.28)

PCBs

PCB-1016	ug/l	ND(0.23)
PCB-1221	ug/l	ND(0.19)
PCB-1232	ug/l	ND(0.054)
PCB-1242	ug/l	ND(0.025)
PCB-1248	ug/l	ND(0.4)
PCB-1254	ug/l	ND(0.2)
PCB-1260	ug/l	ND(0.31)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

Table 5

Page 1

**Summit National Site
Summary of Ground Water Data**

Time Printed: 9:29 am

<u>Location:</u>	Rinse Blank1	Rinse Blank2	Rinse Blank3	Rinse Blank4	Rinse Blank5	Rinse Blank6
<u>Sample ID:</u>	GW-008	RB-019	RB-030	GW-043	RB-070	GW-062
<u>Date Sampled</u>	05/19/97	05/20/97	05/20/97	05/21/97	05/22/97	05/22/97
<u>Parameters</u>		<u>Units</u>				
<u>Volatile Organic Compounds</u>						
1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)
<u>Inorganic Compounds</u>						
Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	ND(3)	ND(3)	ND(3)	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

Table 6

Page 1 (a)

Summit National Site
Summary of Ground Water Data

Time Printed: 9:31 am

Location:

Trip Blank1

05/14/97

Trip Blank2

05/14/97

Trip Blank3

05/14/97

Trip Blank4

05/14/97

*Date Sampled:*ParametersUnitsVolatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone {methyl ethyl ketone}	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Trichloroethylene	ug/l	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

ATTACHMENT C
DATA QUALITY EVALUATION

MEMO

TO: Stephen Whillier REFERENCE NO: 6029-50
FROM: Nancy Bergstrom *NBS* DATE: July 22, 1997
RE: Data Quality Assessment and Validation for Groundwater Samples
Collected During the Sixth Groundwater Sampling Event at the
Summit National Superfund Site in Deerfield Township of Portage
County, Ohio

The following details an analytical data quality assessment of the data resulting from the May 1997 collection of groundwater samples during the sixth groundwater sampling event at the above-referenced Site. The samples, identified in Table 1, were analyzed for the parameters presented in Table 2 by Accutest Laboratories of Dayton, New Jersey using the analytical methods presented in Table 2. The quality control criteria used to assess the data were established by the methods and the Site-specific quality assurance project plan.¹

Holding Time Periods

The holding time periods for the analyses are listed in Table 3. The samples were prepared and analyzed within the required holding time periods as indicated by the sample collection and analysis dates on the chain-of-custody documents and the analytical reports provided by the laboratory.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free of detectable concentrations of target analytes, indicating no significant laboratory contamination occurred.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by surrogate compound percent recoveries. The surrogate recovery acceptance criteria were met.

¹Application of quality assurance criteria was consistent with the relevant guidance in "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94-013, February 1994.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries - Organics

To assess the accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and relative percent differences (RPDs) were determined. Several semivolatile organic compounds (SVOC) MS/MSD percent recoveries and RPDs violated the acceptance criteria in one SVOC MS/MSD sample. Qualification of the investigative samples was deemed unnecessary since the sample chosen by the laboratory for MS/MSD analysis was not associated with the project. All remaining MS/MSD percent recovery and RPD data were acceptable.

Matrix Spike (MS) Percent Recoveries - Inorganics

In order to evaluate the effects that the sample matrix may have on the digestion and measurement procedures of an analysis, samples were fortified with a known concentrations of the analytes and analyzed as matrix spike samples. The MS sample data were acceptable.

Duplicate Sample Analysis - Inorganics

The precision of the inorganic method was monitored by the analysis of laboratory duplicate samples. Table 4 presents the data which should be qualified due to violation of duplicate acceptance criteria. The remaining duplicate sample data were acceptable.

Check Sample Percent Recoveries

Check sample percent recoveries were examined to assess the overall performance and accuracy of the laboratory procedures. One volatile organic compound (VOC) and several SVOCs were recovered above the acceptance criteria in several check samples, but qualification of the associated investigative sample data was unnecessary since these compounds were not detected in the samples. The remaining check sample percent recovery data were acceptable.

Field Duplicate Samples

To assess the overall field and laboratory precision of the sampling and analysis effort, eight field duplicate sample sets were collected. Table 5 presents the results of the detected analytes in the field duplicate sample sets.

Trip Blank Samples

To monitor for cross-contamination of VOC samples during sample transport and storage, four trip blank samples were submitted with the investigative samples. The trip blank samples were reported to be free of detectable concentrations of target analytes.

Field Blank Samples

Seven field blank samples were collected to evaluate the effectiveness of the field decontamination procedures. Target analytes were not detected in the field blank samples.

Completeness

Completeness, as required by the total number of usable results versus the total number of results was required to be 90 percent or greater. The data were considered usable (with limited qualifications) and the completeness criteria was determined to have been met.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted.

NB/lo/25

Attachments

cc: Steven Day

TABLE 1

SAMPLE IDENTIFICATION NUMBERS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

GW-6029-051997-001	GW-6029-052197-036
GW-6029-051997-002	GW-6029-052197-037
GW-6029-051997-003	GW-6029-052197-038
GW-6029-051997-004	GW-6029-052197-039
GW-6029-051997-005	GW-6029-052197-040
GW-6029-051997-006	GW-6029-052197-041
GW-6029-051997-007	GW-6029-052197-042
RB-6029-051997-008	RB-6029-052197-043
GW-6029-051997-009	GW-6029-052197-044
GW-6029-051997-010	GW-6029-052197-045
GW-6029-051997-011	GW-6029-052197-046
GW-6029-051997-012	GW-6029-052197-047
GW-6029-051997-013	GW-6029-052197-048
GW-6029-052097-014	GW-6029-052197-049
GW-6029-052097-015	GW-6029-052197-050
GW-6029-052097-016	SW-6029-052197-051
GW-6029-052097-017	SW-6029-052197-052
GW-6029-052097-018	FB-6029-052197-053
RB-6029-052097-019	S-6029-052197-054
GW-6029-052097-020	S-6029-052197-055
GW-6029-052097-021	GW-6029-052297-056
GW-6029-052097-022	GW-6029-052297-057
GW-6029-052097-023	GW-6029-052297-058
GW-6029-052097-024	GW-6029-052297-059
GW-6029-052097-025	GW-6029-052297-060
GW-6029-052097-026	GW-6029-052297-061
GW-6029-052097-027	RB-6029-052297-062
GW-6029-052097-028	GW-6029-052297-063
GW-6029-052097-029	GW-6029-052297-064
RB-6029-052097-030	GW-6029-052297-065
GW-6029-052097-031	GW-6029-052297-066
GW-6029-052097-032	GW-6029-052297-067
GW-6029-052097-033	GW-6029-052297-068
GW-6029-052197-034	GW-6029-052297-069
GW-6029-052197-035	RB-6029-052297-070

TABLE 2

ANALYTICAL METHODS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Parameter</i>	<i>Analytical Method</i>	
SSPL ¹ Volatile Organic Compounds (VOC)	SW-846 ²	8240
Cadmium, Lead, Nickel	SW-846	6010
Target Compound List (TCL) VOC	SW-846	8240
TCL Semivolatile Organic Compounds (SVOC)	SW-846	8270
TCL Pesticides/Polychlorinated biphenyls (PCB)	SW-846	8080

¹ Site-Specific Parameter List (SSPL) VOCs include: acetone, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloroethene (total), ethylbenzene, toluene, xylenes (total), trichloroethene and 2-butanone.

² "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, 3rd Edition with promulgated updates, November 1986.

TABLE 3

HOLDING TIME PERIODS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Parameter</i>	<i>Holding Time Period</i>
SSPL VOC, TCL VOC	- 14 days from sample collection to completion of analysis
TCL SVOC, TCL Pesticide/PCB	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis
Cadmium, Lead, Nickel	- 6 months from sample collection to completion of analysis

TABLE 4

**QUALIFICATION OF SAMPLE DATA DUE TO
VIOLATION OF INORGANICS DUPLICATE ACCEPTANCE CRITERIA
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

<i>Analyte</i>	<i>Sample ID</i>	<i>Qualifier</i> ¹
Lead	GW-6029-051997-001	J
	GW-6029-051997-002	J
	GW-6029-051997-006	J
	GW-6029-051997-007	J
	GW-6029-051997-011	J
	GW-6029-051997-012	J

¹ The sample results should be qualified as:

Inorganics

J - The associated value is an estimated quantity.

TABLE 5

SUMMARY OF DETECTED ANALYTES¹
FIELD DUPLICATE SAMPLE SETS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Parameter</i>	<i>Investigative Sample</i> GW-6029-052297-057	<i>Duplicate Sample</i> GW-6029-052297-058	<i>RPD</i> ²
1,1-Dichloroethane	17.3	21.6	22
1,2-Dichloroethane	10.3	12.0	15
1,2-Dichloroethene (total)	8.2	10.4	24
Trichloroethene	3.1	3.8	20
Lead	4.3	ND(3.0) ³	NC ⁴

¹ Results reported in micrograms per liter ($\mu\text{g}/\text{L}$).

² RPD = Relative Percent Difference

³ ND () = Not detected at the quantitation limit stated in parentheses.

⁴ NC = Not calculable

ATTACHMENT D

GROUNDWATER ELEVATIONS AND HYDROGRAPHS

**MAY 1997 GROUNDWATER ELEVATIONS
WATER TABLE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

Page 1 of 1

WELL DESIGNATION	COORDINATES		REFERENCE ELEVATION ft. AMSL	GROUNDWATER		
	NORTH' ft.	EAST' ft.		5/19/97		
				Level ft.	Elev. ft. AMSL	
MW-4	9504.40	5951.81	1091.09	11.25	1,079.84	
MW-11	9415.00	5636.28	1,095.93	19.20	1,076.73	
MW-101	10021.30	4969.30	1,107.57	8.75	1,098.82	
MW-102	10010.12	5512.54	1,100.17	7.04	1,093.13	
MW-103	9591.39	4927.97	1,096.22	3.31	1,092.91	
MW-104	9576.51	5079.94	1,099.81	22.62	1,077.19	
MW-105	9539.58	5136.64	1,101.32	24.47	1,076.85	
MW-106	9549.29	5296.02	1,102.88	25.08	1,077.80	
MW-107	9550.10	5570.26	1,098.27	20.07	1,078.20	
MW-108	9549.95	5779.50	1,091.96	16.94	1,075.02	
MW-109	9586.47	5874.83	1,087.42	4.68	1,082.74	
MW-110	9641.97	6124.53	1,086.87	6.83	1,080.04	
MW-111	9395.45	5296.51	1,099.67	22.80	1,076.87	
MW-113	9392.18	5825.52	1,088.46	8.85	1,079.61	
MW-114	9280.30	5265.10	1,097.27	14.23	1,083.04	
MW-115	9299.48	5637.84	1,101.83	22.21	1,079.62	
MW-116	9004.70	5236.40	1,105.54	24.50	1,081.04	
MW-117	9014.47	5616.11	1,123.97	44.95	1,079.02	
MW-118	9171.40	5970.27	1,098.38	25.50	1,072.88	
PZ-1	9795.10	5095.57	1,104.43	10.08	1,094.35	
PZ-101	9782.89	5283.08	1,108.53	16.22	1,092.31	
PZ-102	9831.20	5509.98	1,100.21	12.94	1,087.27	
PZ-103	9862.09	5829.02	1,093.98	7.92	1,086.06	
PZ-104	9195.17	5325.76	1,097.54	16.58	1,080.96	
PZ-105	9232.15	5667.49	1,101.60	22.02	1,079.58	
PZ-106	9291.14	5937.35	1,102.23	24.51	1,077.72	
MH-1	9640.53	5089.94	1102.78	25.49	1,077.29	
MH-2	9532.78	5106.02	1101.04	23.81	1,077.23	
MH-3	9476.17	5159.69	1100.95	23.73	1,077.22	
MH-4	9363.72	5279.02	1100.05	22.86	1,077.19	
MH-5	9381.78	5623.06	1095.68	18.67	1,077.01	
MH-6	9412.62	5810.76	1088.64	11.69	1,076.95	
MH-7	9532.38	5812.80	1089.29	12.20	1,077.09	
MH-8	9751.55	5815.45	1089.23	11.41	1,077.82	
WET WELL	9364.74	5464.02	1098.86	21.82	1,077.04	

MAY 1997 GROUNDWATER ELEVATIONS
UPPER INTERMEDIATE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Page 1 of 1

WELL DESIGNATION	COORDINATES		REFERENCE ELEVATION ft. AMSL	GROUNDWATER	
	NORTH' ft.			5/19/97	
	EAST' ft.	Level ft.	Elev. ft.	ft. AMSL	
MW-201	10020.44	4952.70	1,107.52	12.28	1,095.24
MW-202	10043.72	5514.36	1,099.50	25.69	1,073.81
MW-203	9697.80	5096.10	1,103.35	12.10	1,091.25
MW-204	9356.11	5120.25	1,098.01	12.73	1,085.28
MW-205	9223.34	5679.69	1,100.90	21.26	1,079.64
MW-206	9548.49	5312.36	1,103.22	30.59	1,072.63
MW-207	9550.05	5551.84	1,098.51	19.78	1,078.73
MW-209	9589.24	5861.64	1,087.66	10.82	1,076.84
MW-219	9802.95	5292.50	1,108.24	25.25	1,082.99
MW-220	9893.22	5964.42	1,090.92	10.22	1,080.70
MW-223	9356.57	5466.72	1,098.37	20.57	1,077.80
MW-224	9401.54	5813.55	1,089.41	17.43	1,071.98
PZ-201	9491.38	5119.35	1,099.74	21.22	1,078.52
PZ-202	9483.49	5367.58	1,101.56	23.51	1,078.05
PZ-203	9350.00	5369.76	1,098.31	21.07	1,077.24
PZ-204	9628.38	5616.09	1,095.41	17.06	1,078.35
PZ-205	9494.93	5643.20	1,096.63	21.51	1,075.12
PZ-206	9511.98	5826.33	1,088.05	13.67	1,074.38
PZ-207	9383.66	5740.10	1,091.36	11.56	1,079.80

MAY 1997 GROUNDWATER ELEVATIONS
LOWER INTERMEDIATE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Page 1 of 1

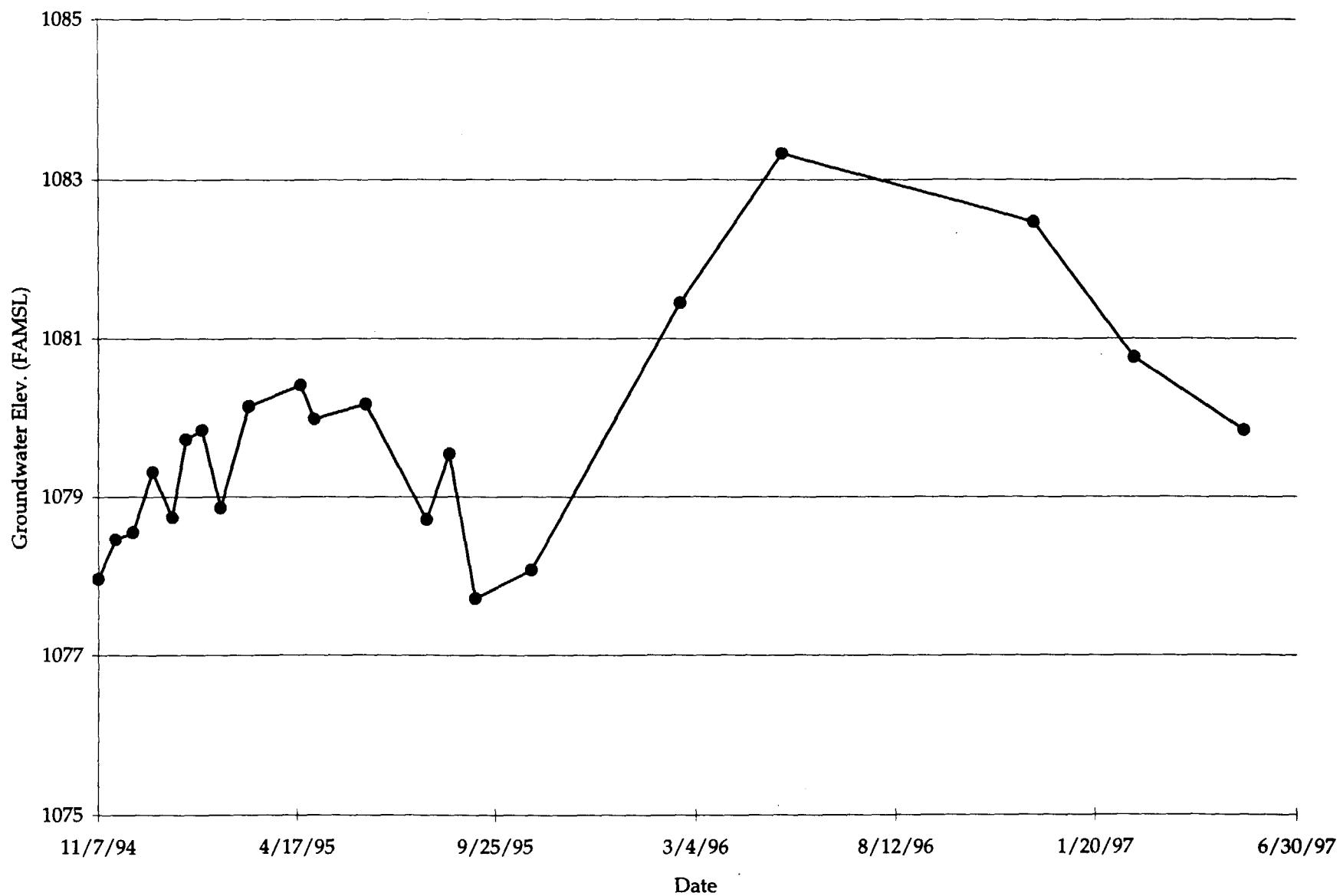
WELL DESIGNATION	COORDINATES		REFERENCE ELEVATION ft. AMSL	GROUNDWATER		
	NORTH' ft.			5/19/97		
	ft.	ft.		Level ft.	Elev. ft. AMSL	
MW-301	10019.41	4940.36	1107.91	28.62	1,079.29	
MW-302	10056.98	5513.56	1100.39	26.71	1,073.68	
MW-303	9670.84	5094.67	1103.15	27.49	1,075.66	
MW-304	9353.32	5135.15	1097.73	16.1	1,081.63	
MW-305	9235.38	5687.49	1101.22	27.70	1,073.52	
MW-306	9539.22	5331.57	1103.14	28.79	1,074.35	
MW-307	9524.78	5556.53	1098.83	24.22	1,074.61	
MW-309	9587.06	5854.74	1087.81	13.31	1,074.50	
MW-319	9793.32	5292.50	1108.07	25.08	1,082.99	
MW-320	9900.11	5961.93	1091.14	20.38	1,070.76	
MW-321	9638.36	5607.85	1095.32	20.56	1,074.76	
MW-322	9462.01	5149.95	1098.88	16.98	1,081.90	
MW-323	9354.44	5455.73	1097.51	24.32	1,073.19	
MW-324	9397.17	5802.09	1089.39	17.62	1,071.77	
PZ-301	9497.67	5112.99	1100.07	19.04	1,081.03	
PZ-302	9482.10	5390.46	1101.25	26.58	1,074.67	
PZ-303	9350.04	5358.60	1098.39	24.06	1,074.33	
PZ-305	9491.50	5649.85	1096.49	21.96	1,074.53	
PZ-306	9515.83	5823.03	1088.35	15.85	1,072.50	
PZ-307	9390.06	5749.78	1091.40	18.31	1,073.09	

**MAY 1997 GROUNDWATER ELEVATIONS
UPPER SHARON UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

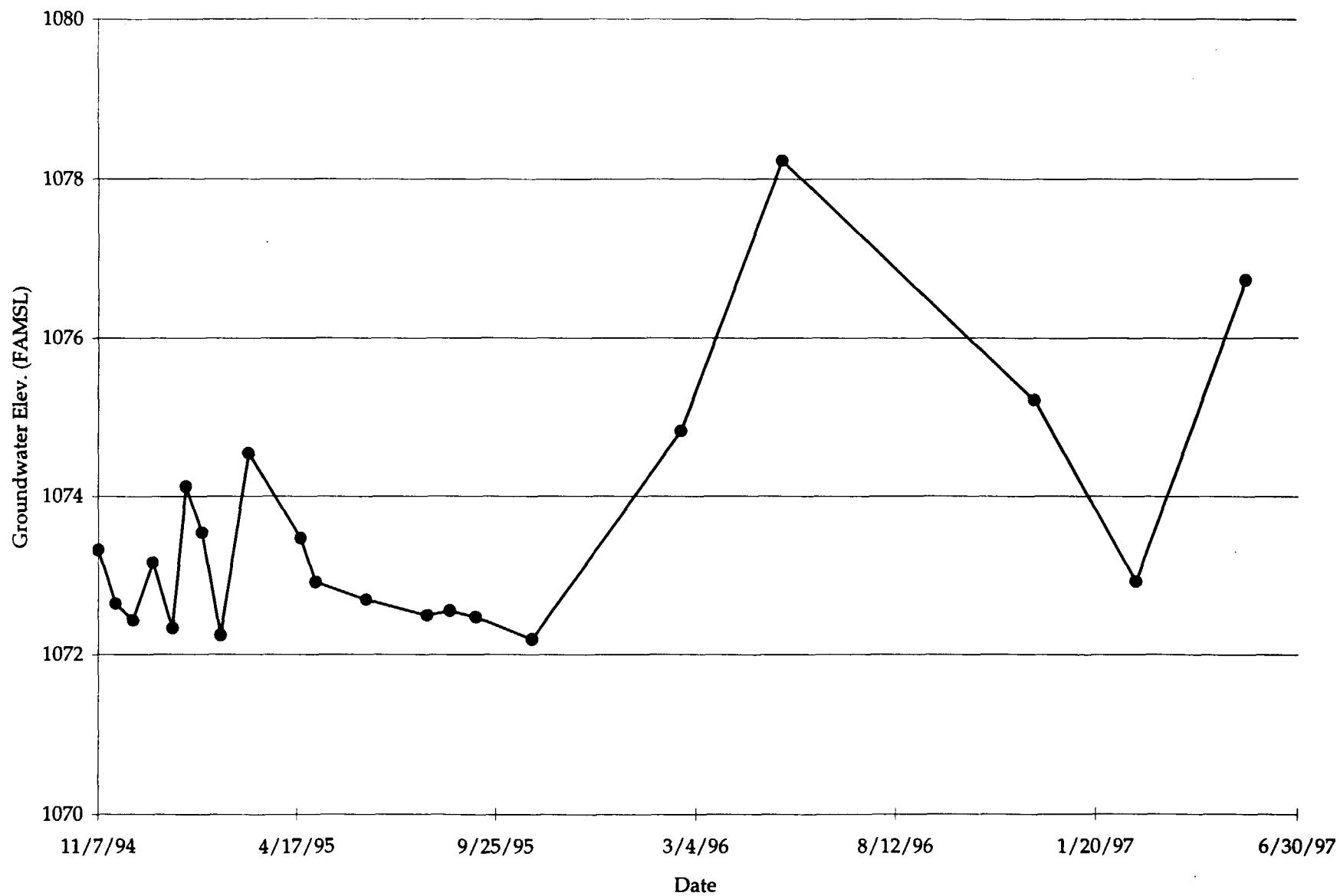
Page 1 of 1

WELL DESIGNATION	COORDINATES		REFERENCE ELEVATION ft. AMSL	GROUNDWATER		
	NORTH' ft.			5/19/97	Level ft.	
				Elev. ft. ft. AMSL		
MW-401	9601.19	5455.66	1,099.75	35.11	1,064.64	
MW-402	9522.16	5955.04	1,089.90	33.63	1,056.27	
MW-414	9285.57	5254.02	1,096.99	24.84	1,072.15	
MW-415	9290.00	5624.74	1,102.25	28.62	1,073.63	
MW-420	9908.04	5960.12	1,091.66	24.60	1,067.06	
MW-421	10034.02	5524.37	1,099.93	28.86	1,071.07	
MW-422	10018.63	4928.82	1,107.38	20.28	1,087.10	
POT. WELL	9920.24	5703.53	1,099.34	75.27	1,024.07	

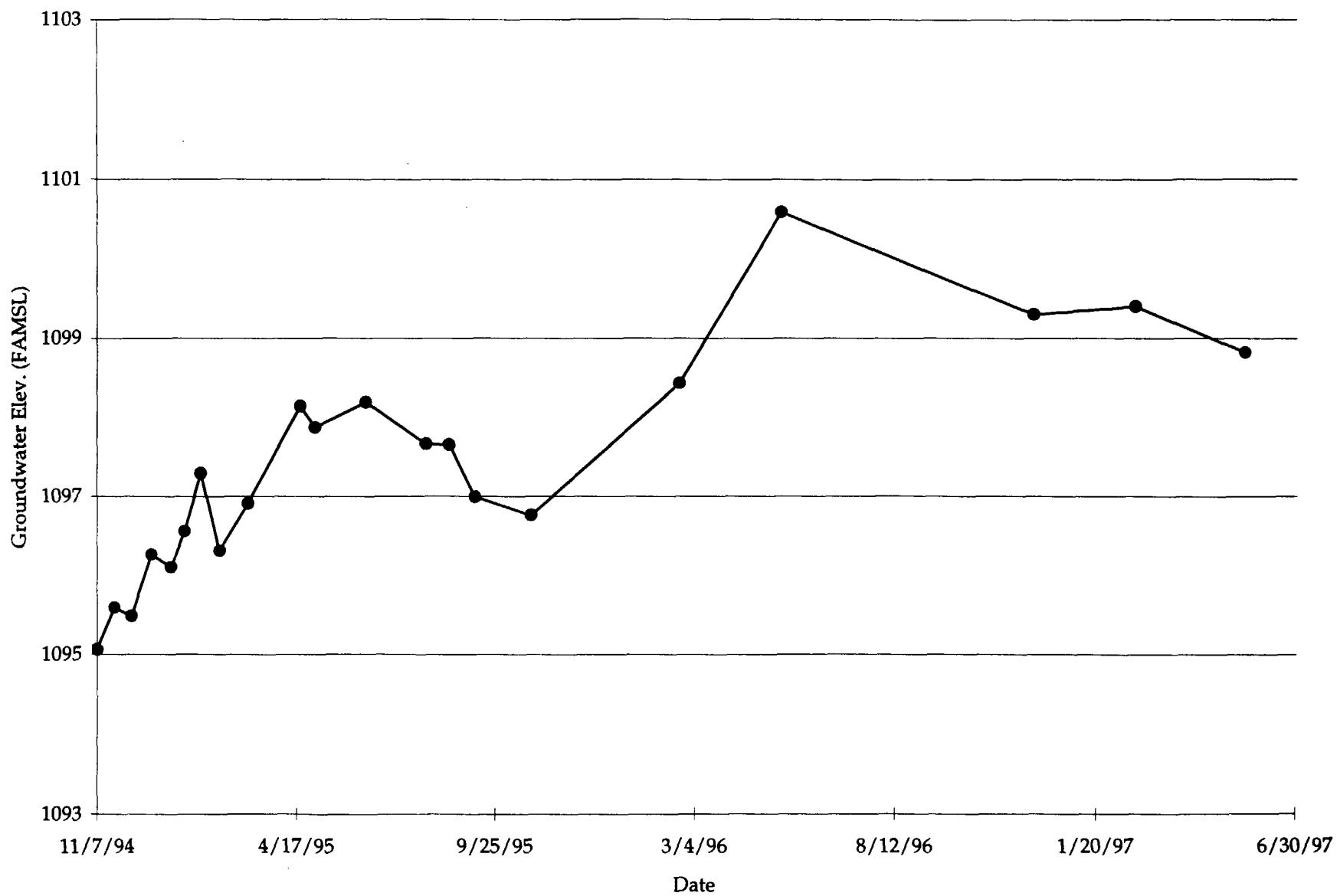
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SUMMIT NATIONAL SUPERFUND SITE



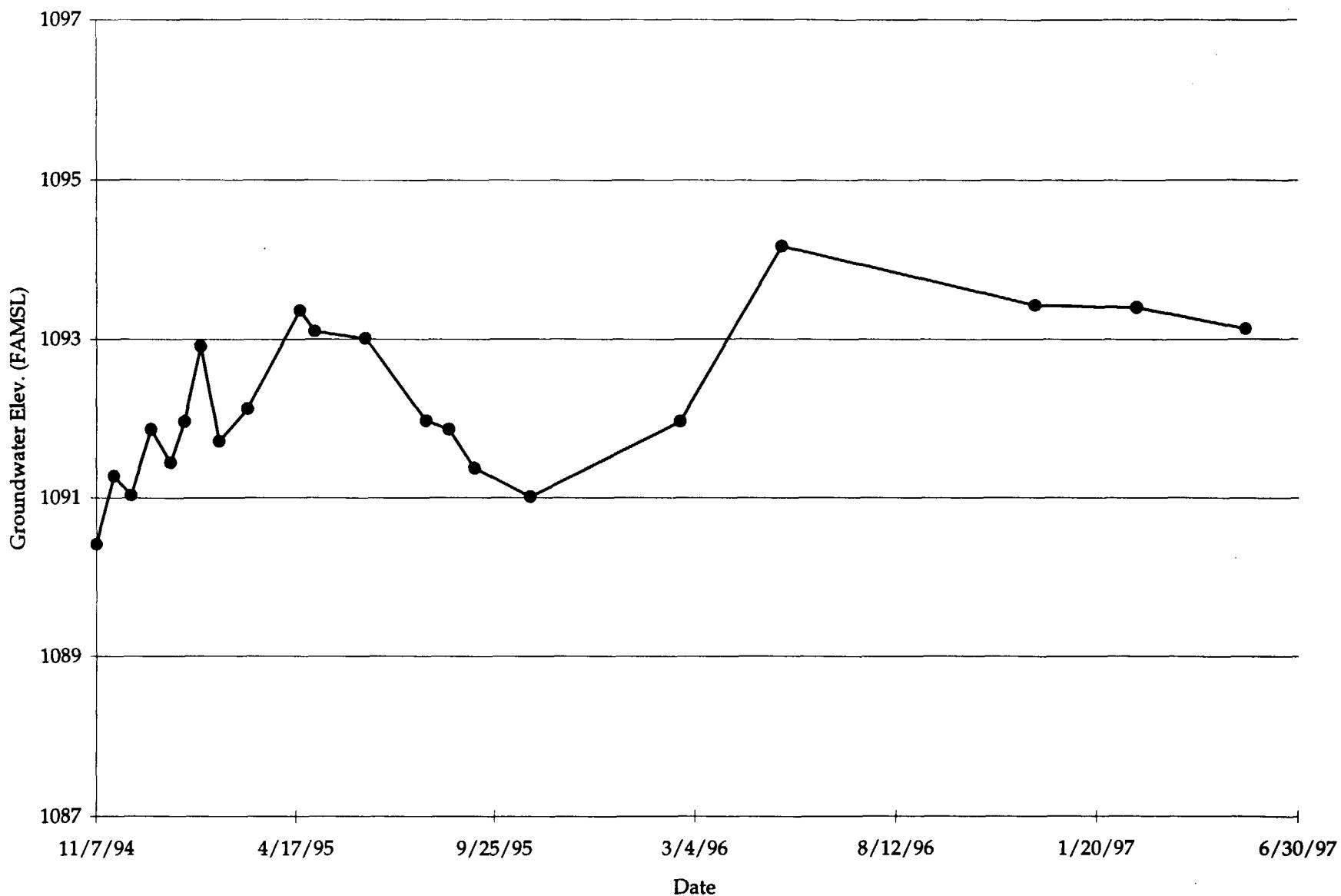
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SUMMIT NATIONAL SUPERFUND SITE



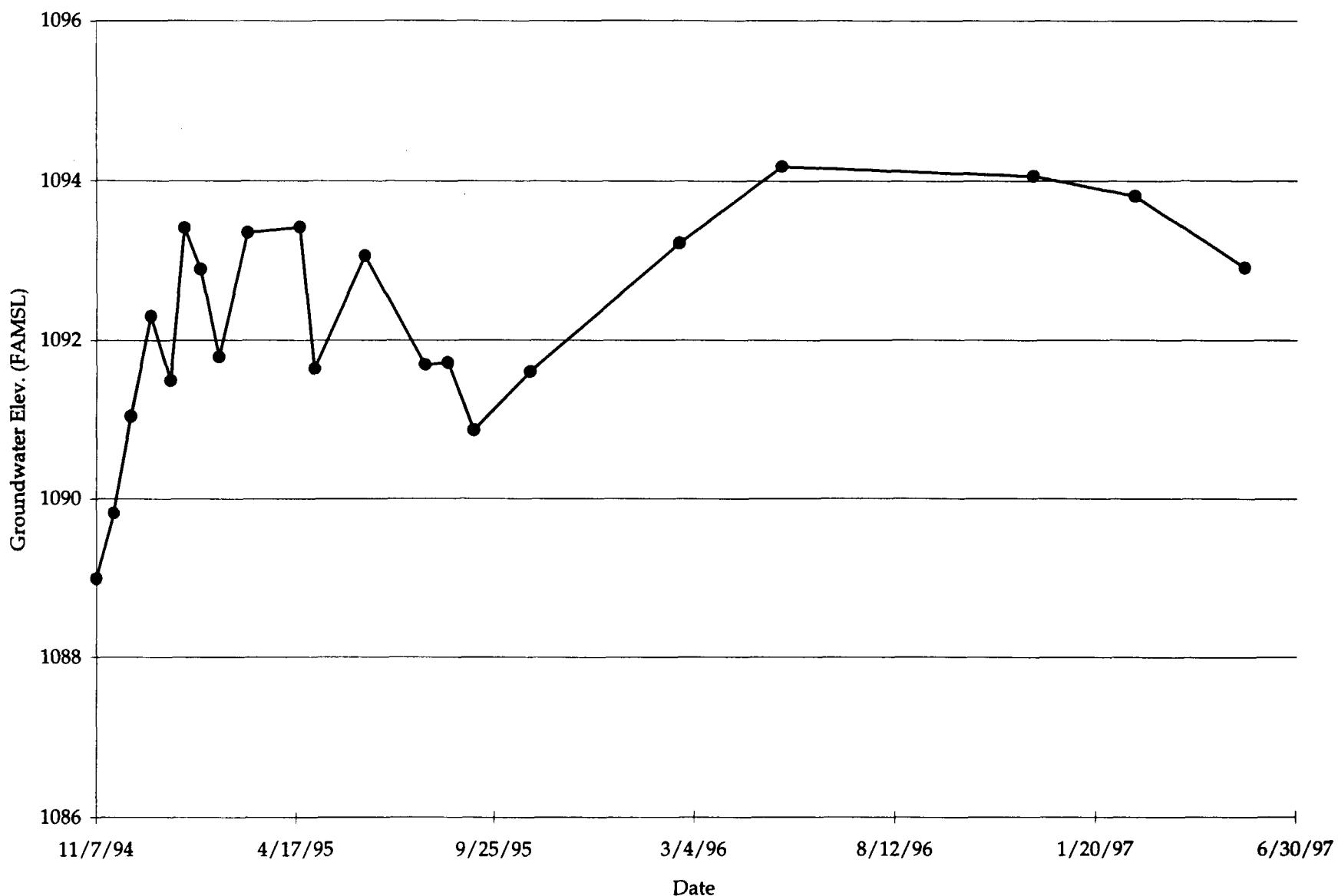
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SUMMIT NATIONAL SUPERFUND SITE



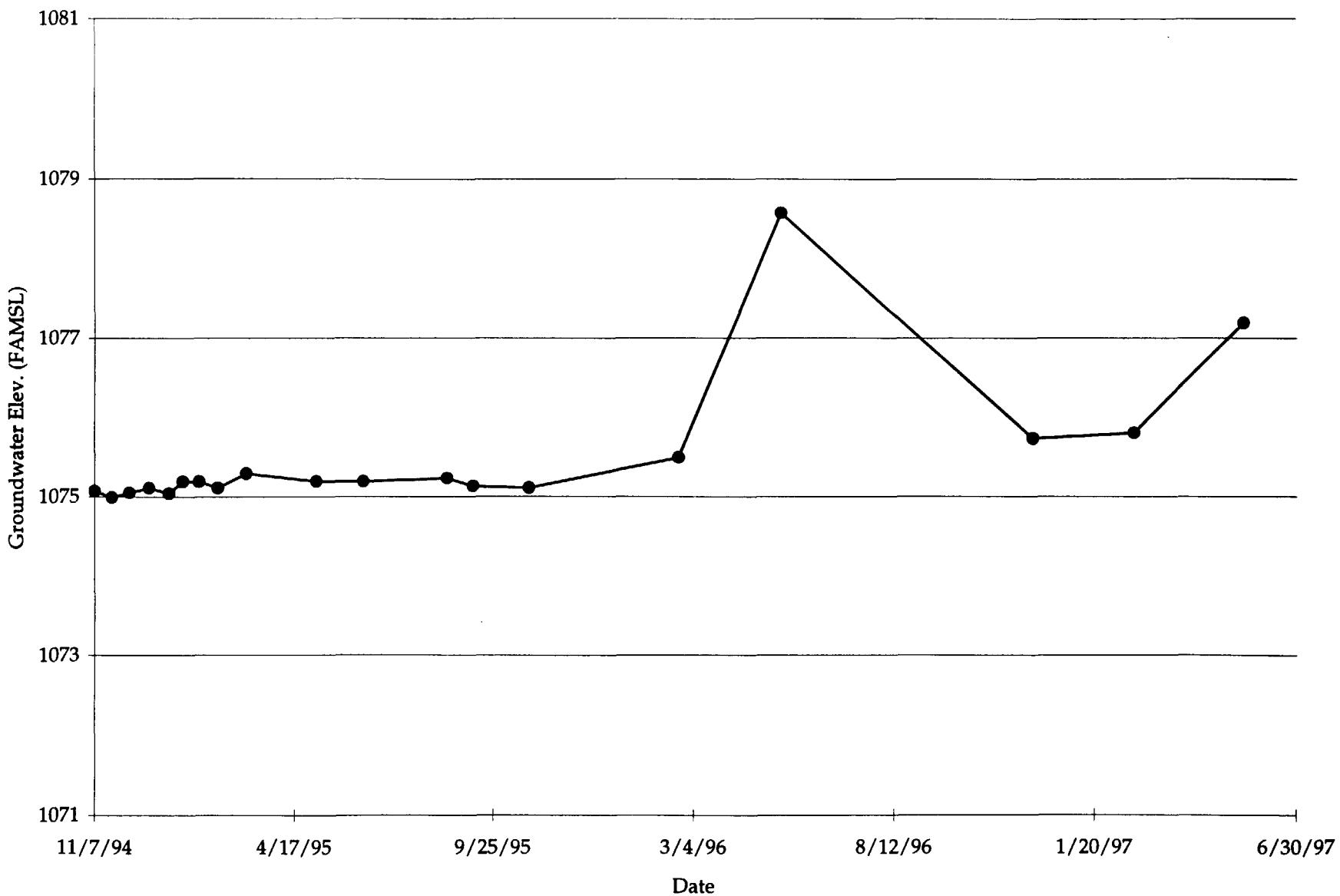
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WATER TABLE UNIT: MW-102
SUMMIT NATIONAL SUPERFUND SITE



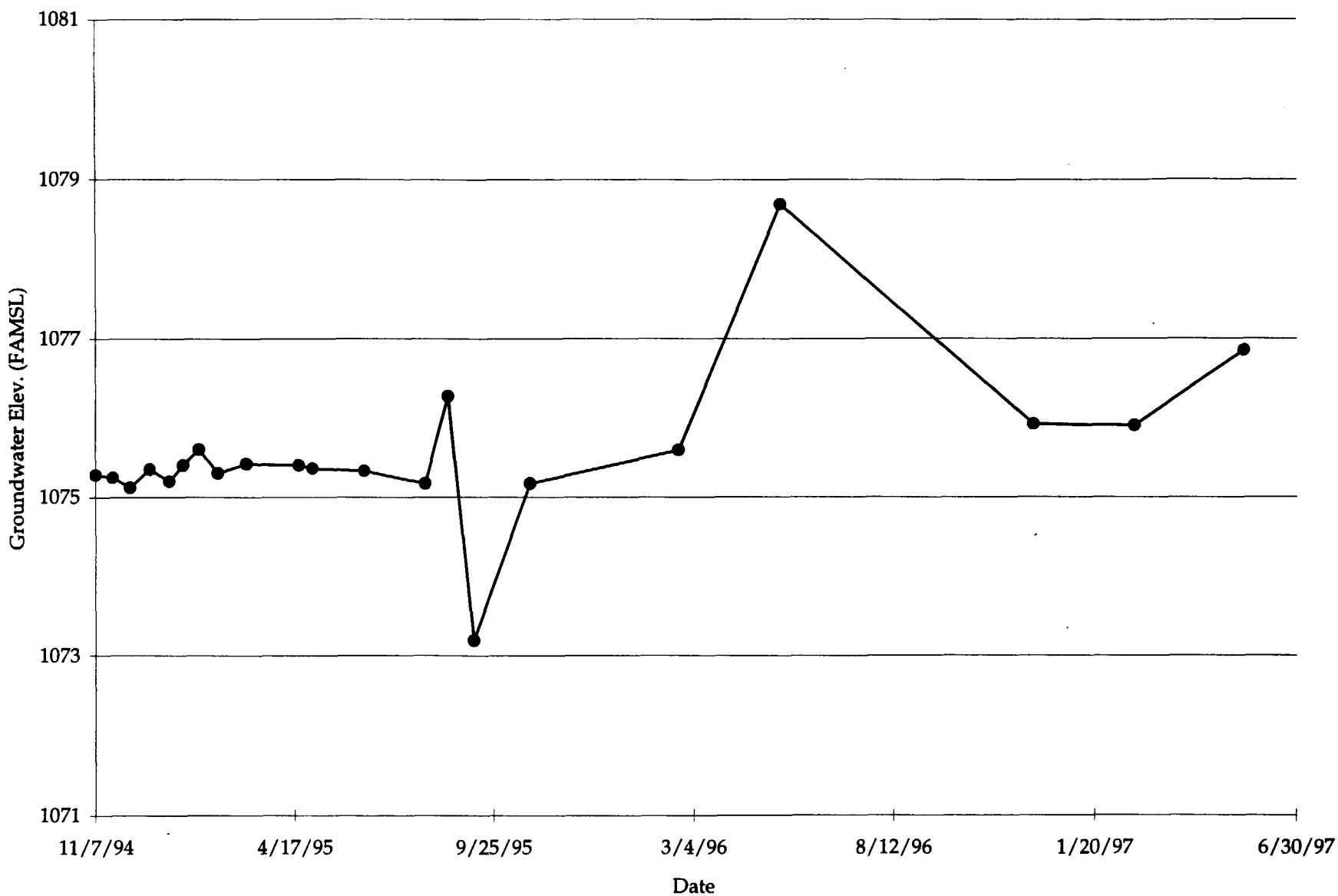
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WATER TABLE UNIT: MW-103
SUMMIT NATIONAL SUPERFUND SITE



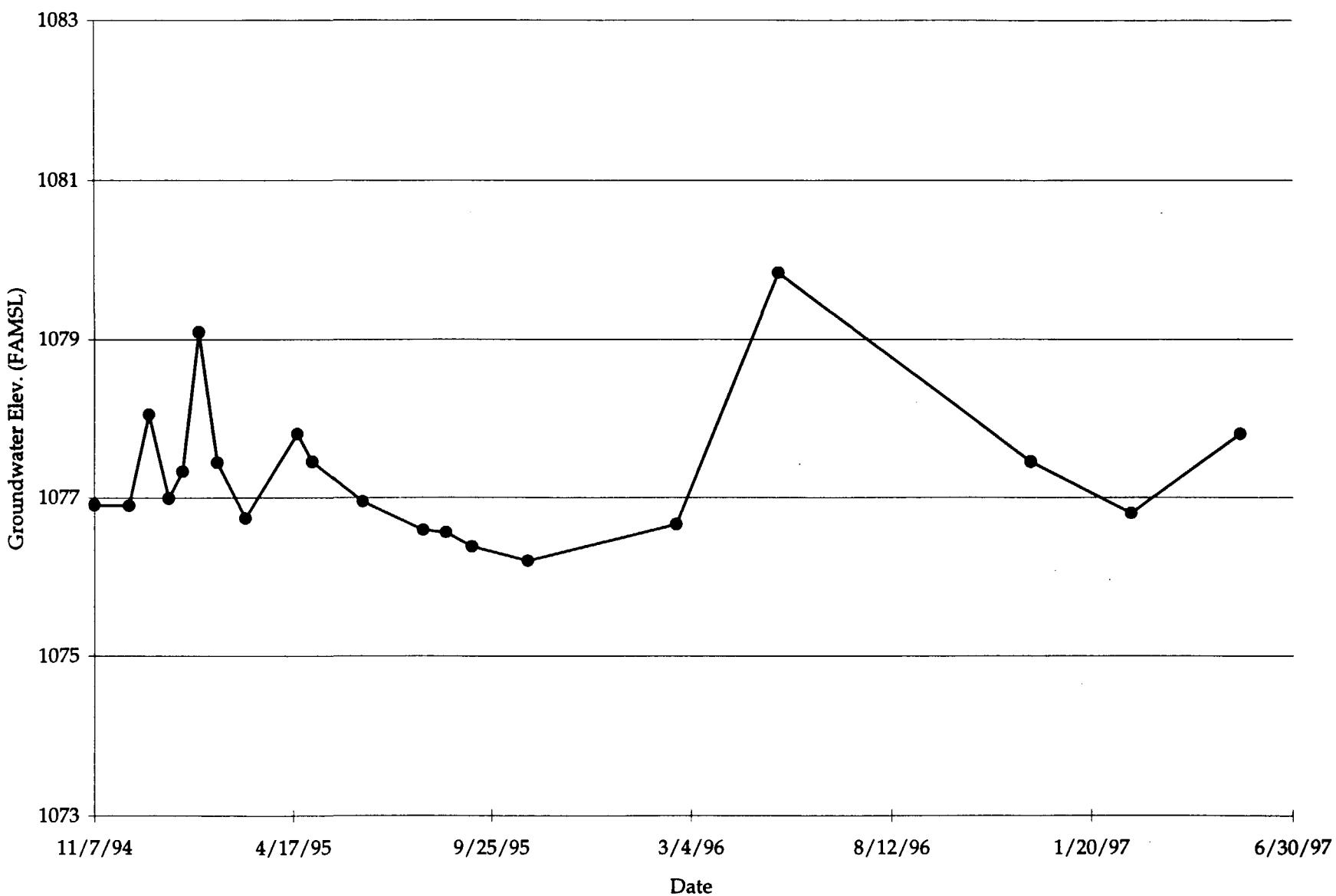
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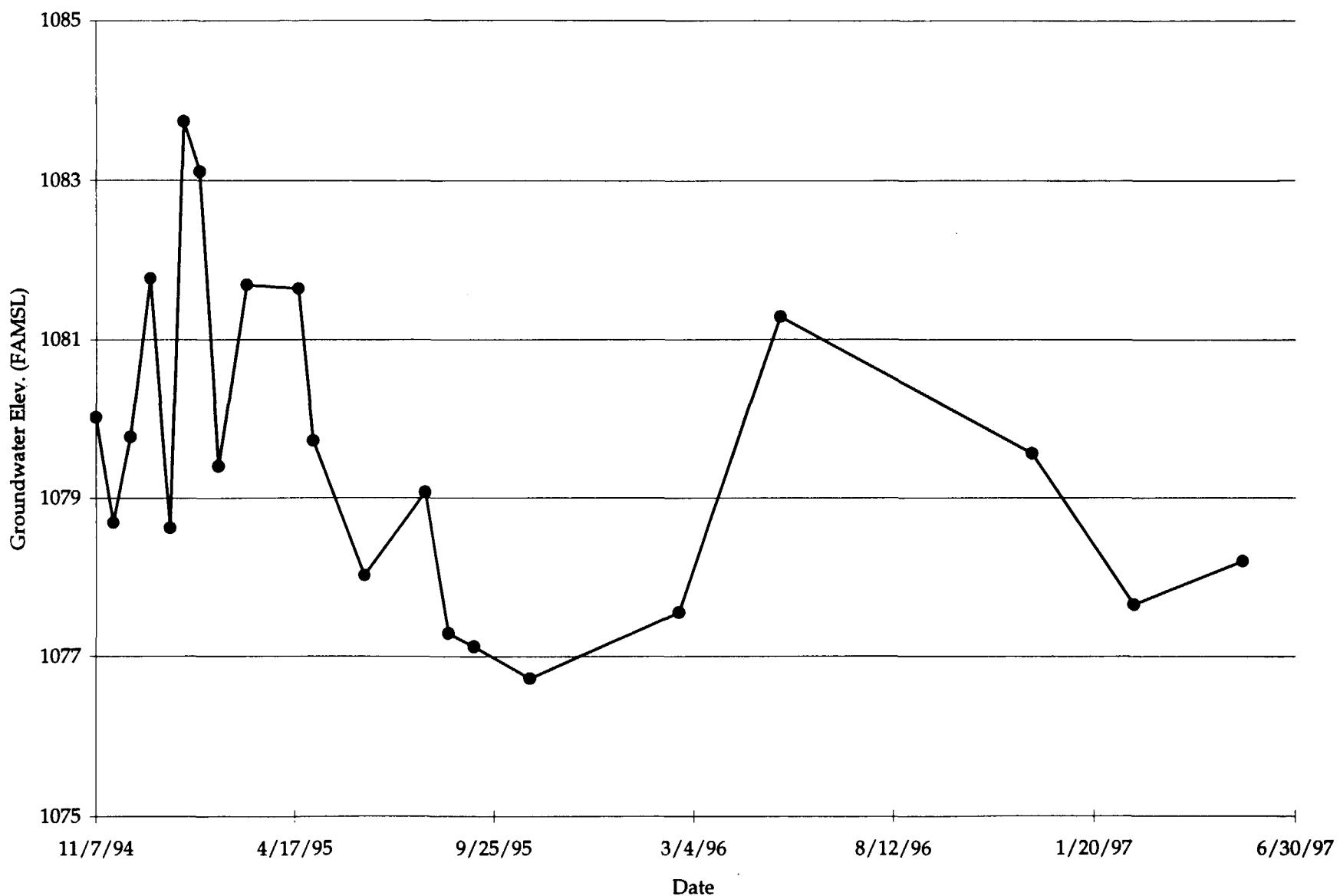
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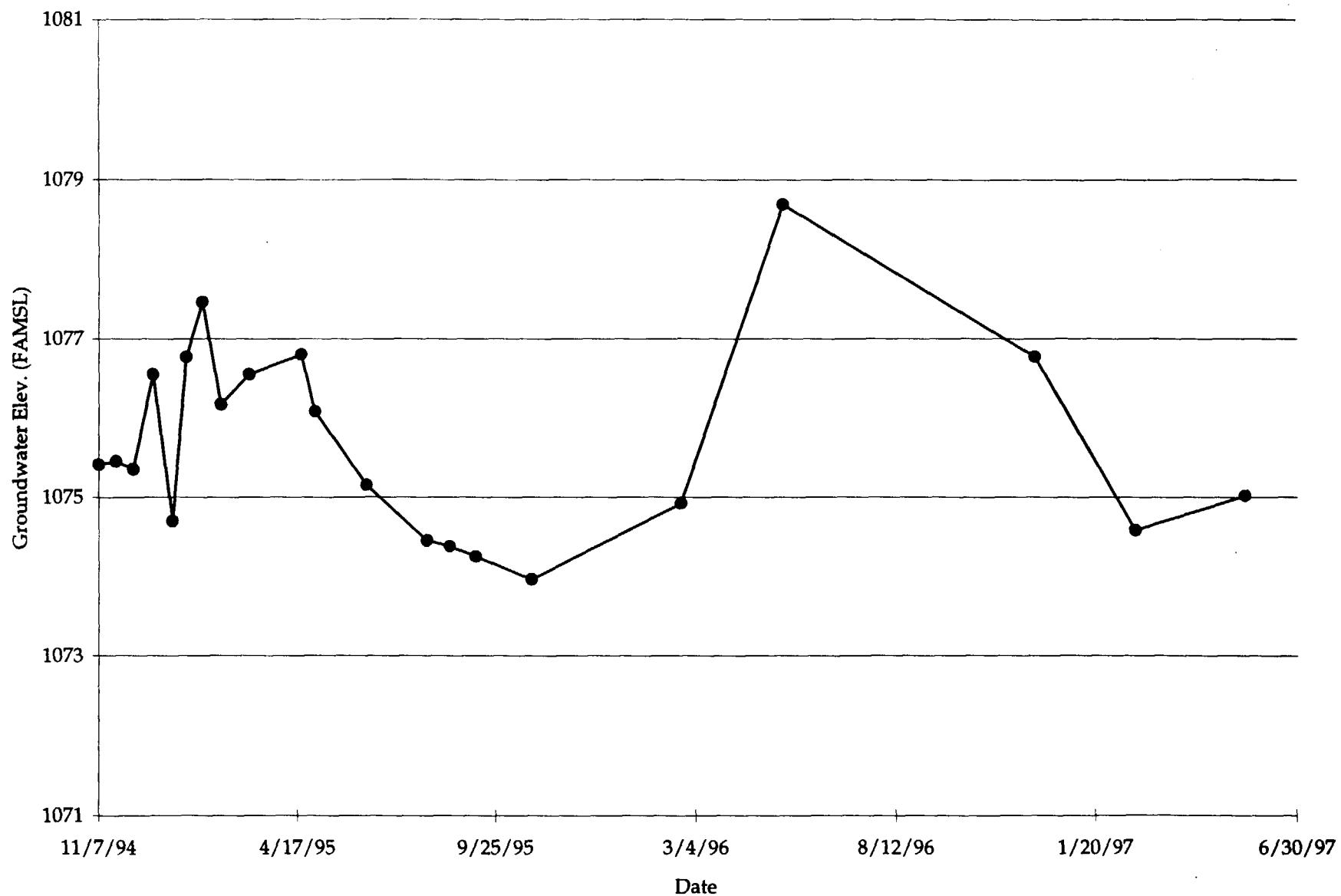
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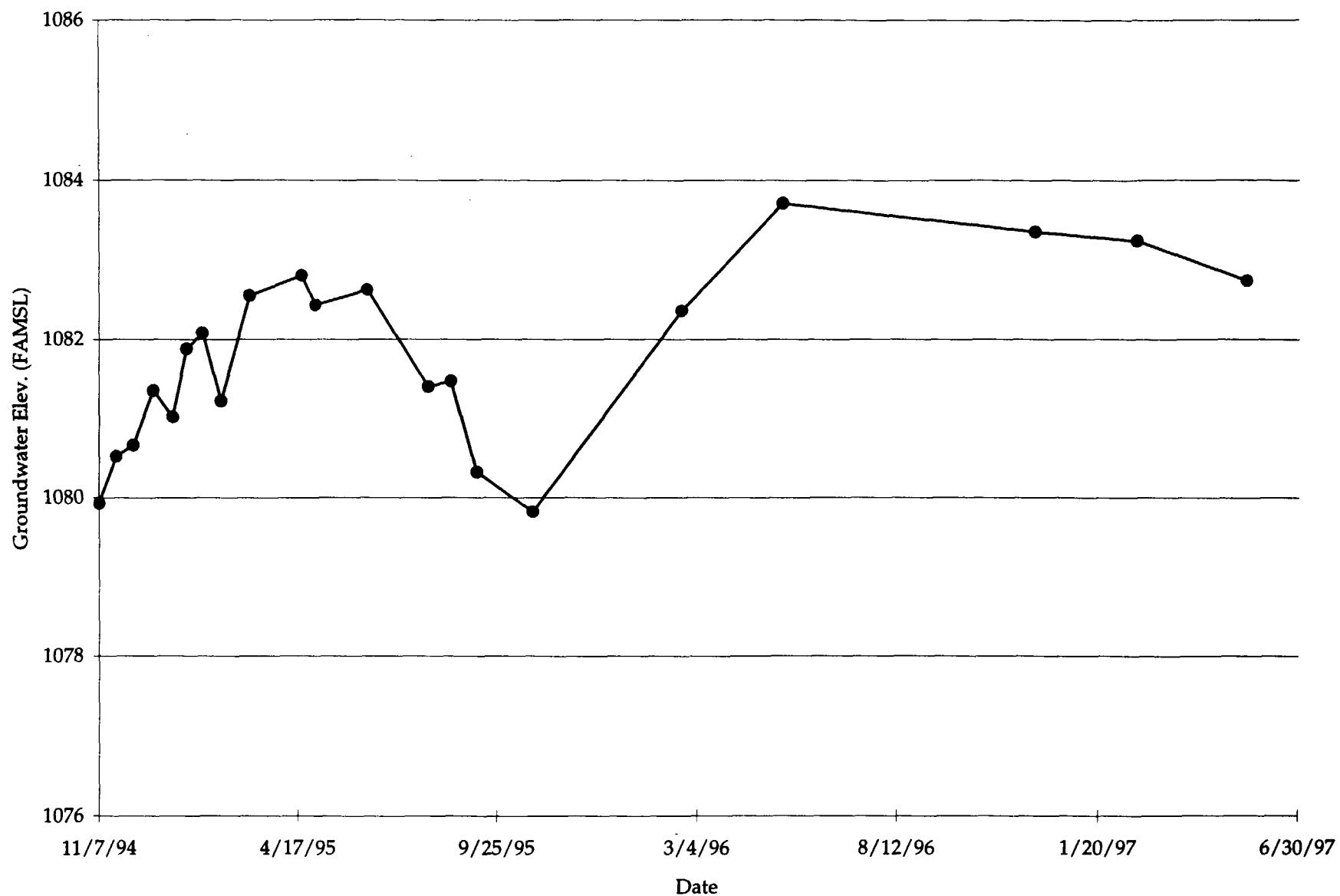
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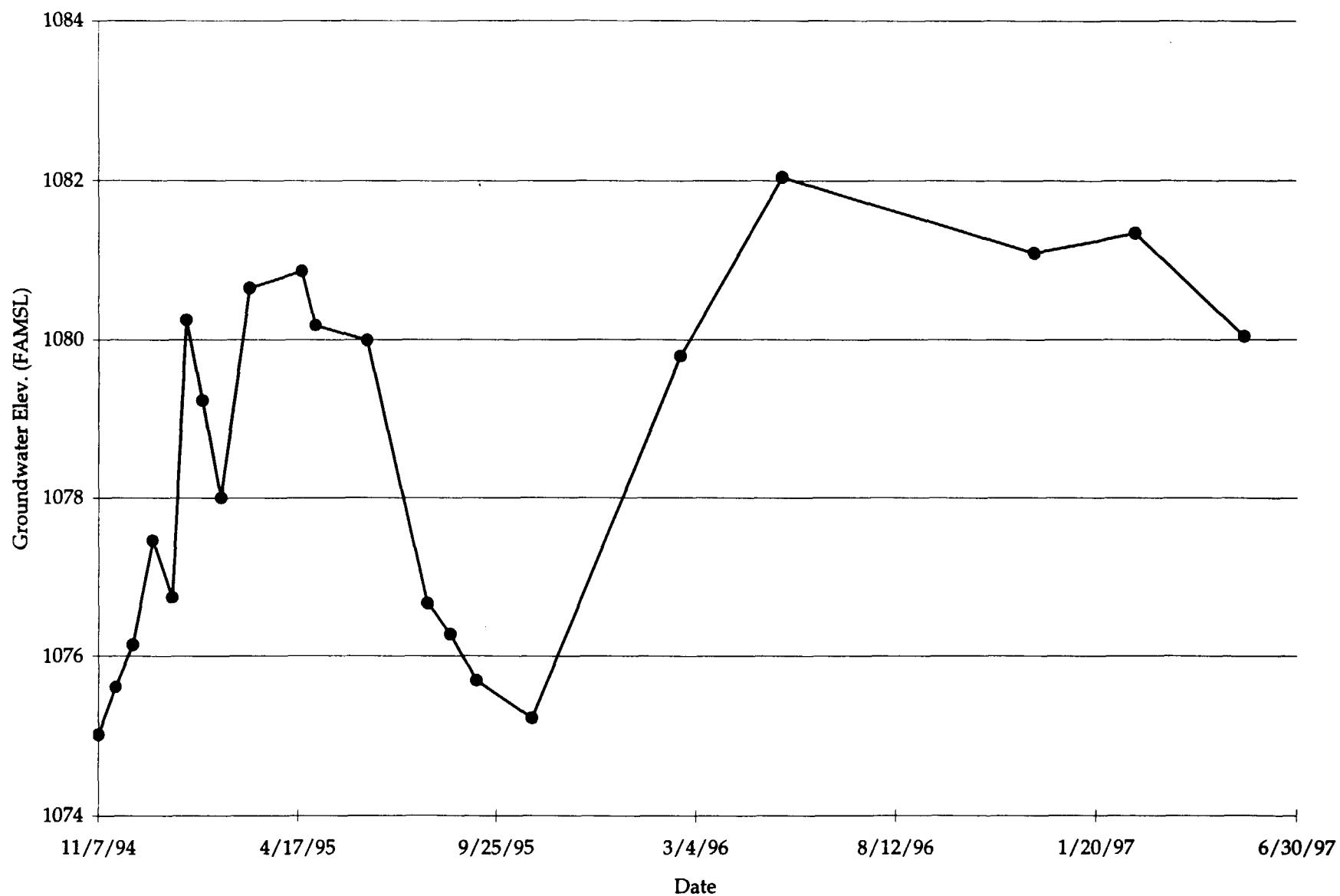
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SUMMIT NATIONAL SUPERFUND SITE



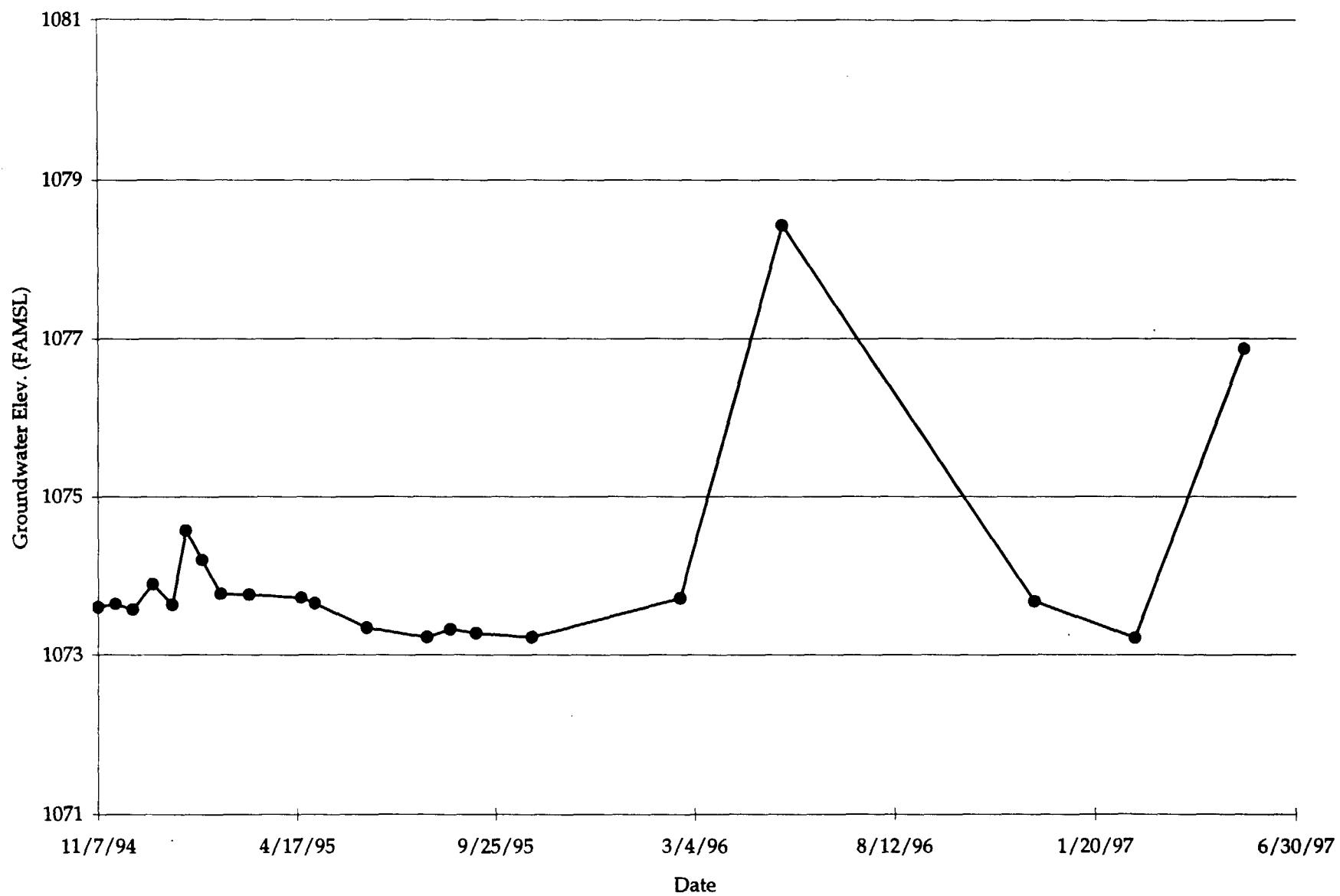
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SUMMIT NATIONAL SUPERFUND SITE



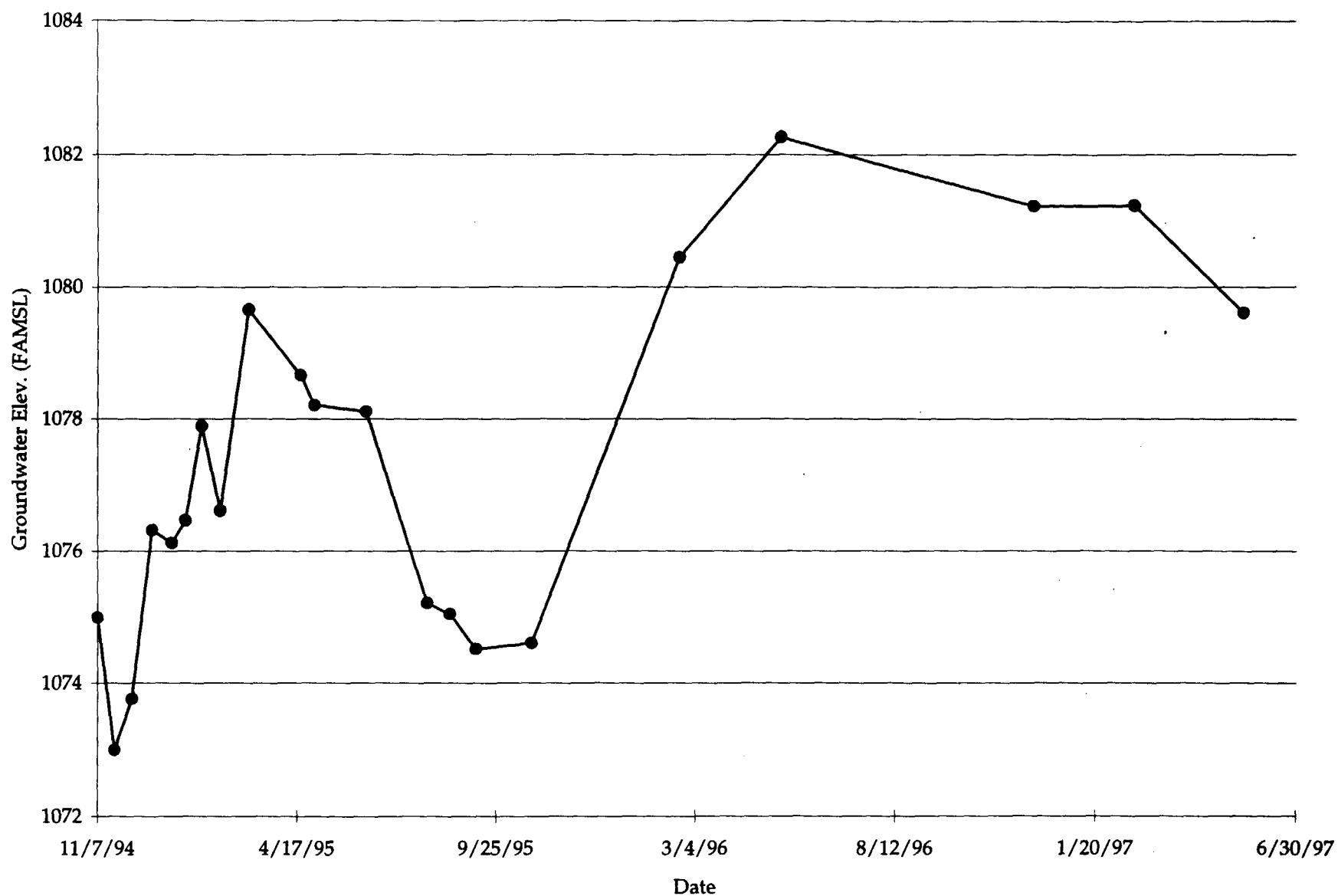
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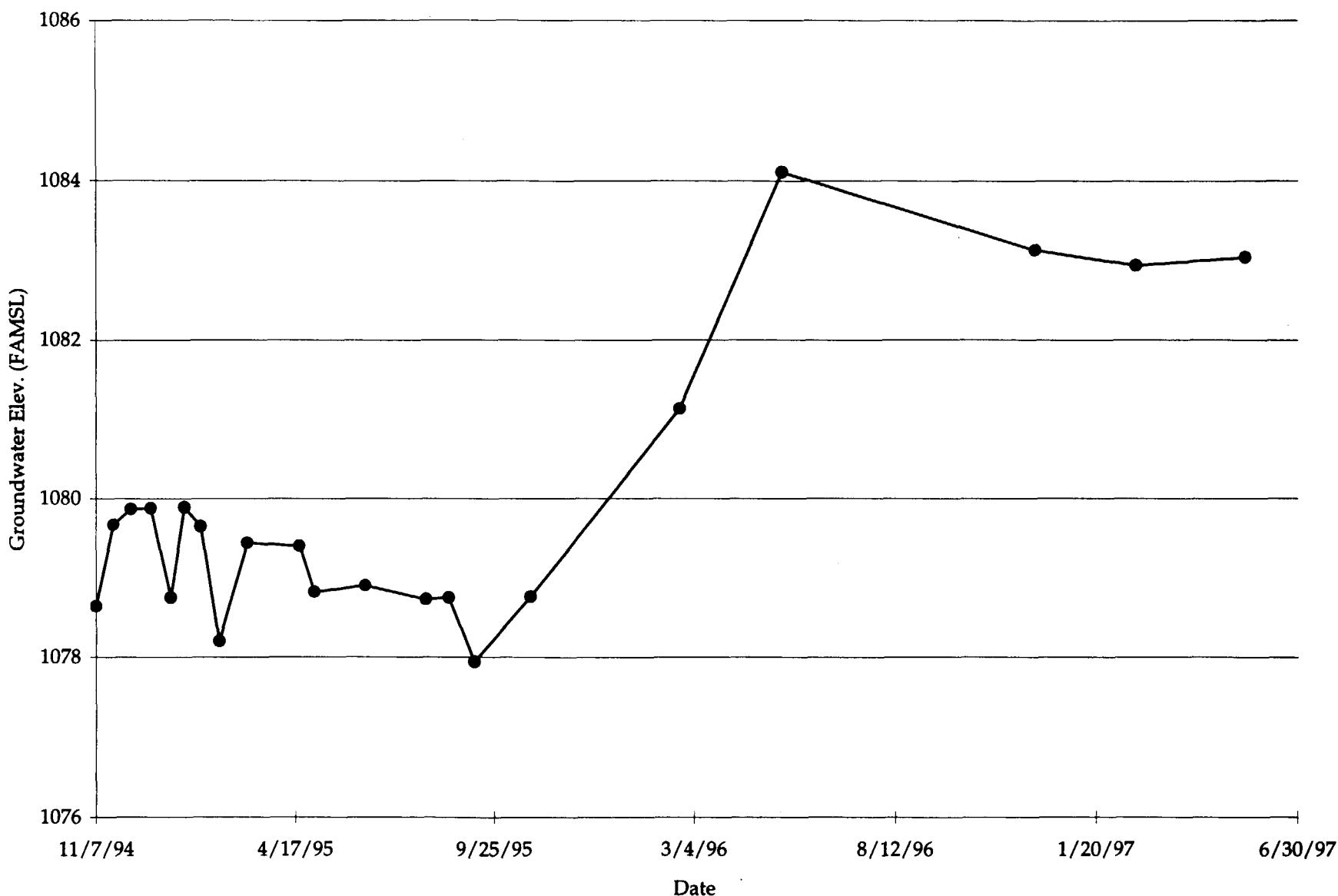
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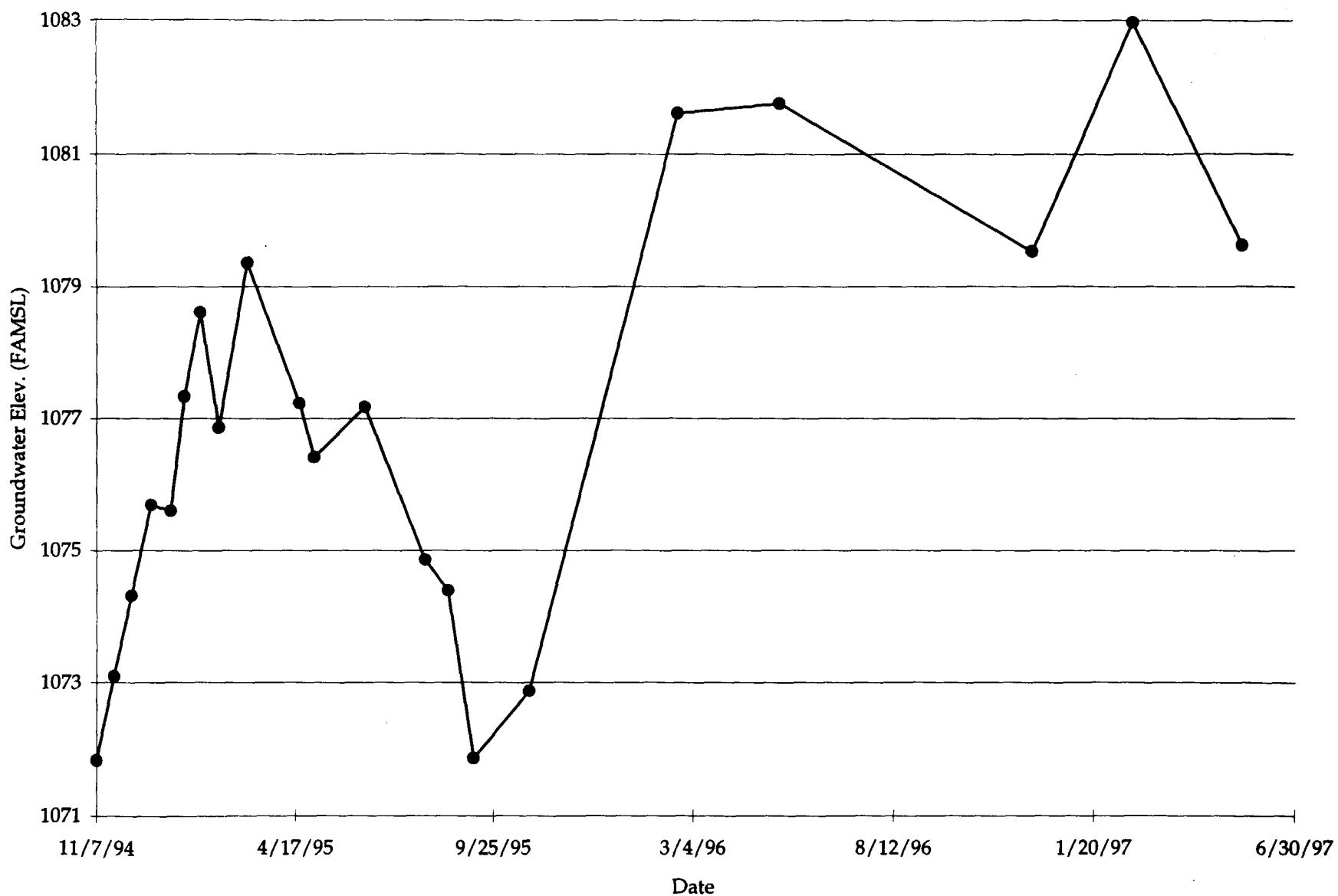
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SUMMIT NATIONAL SUPERFUND SITE



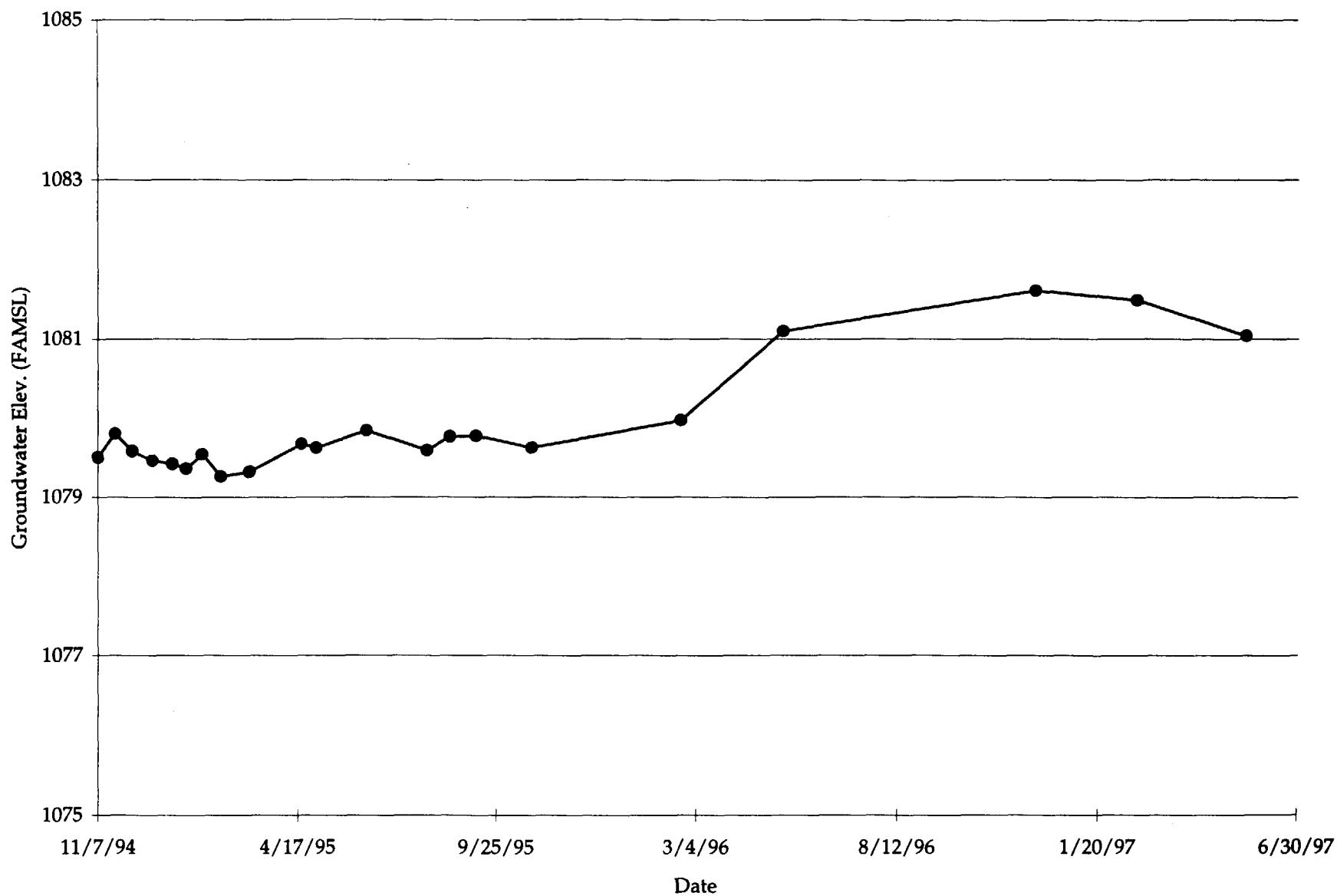
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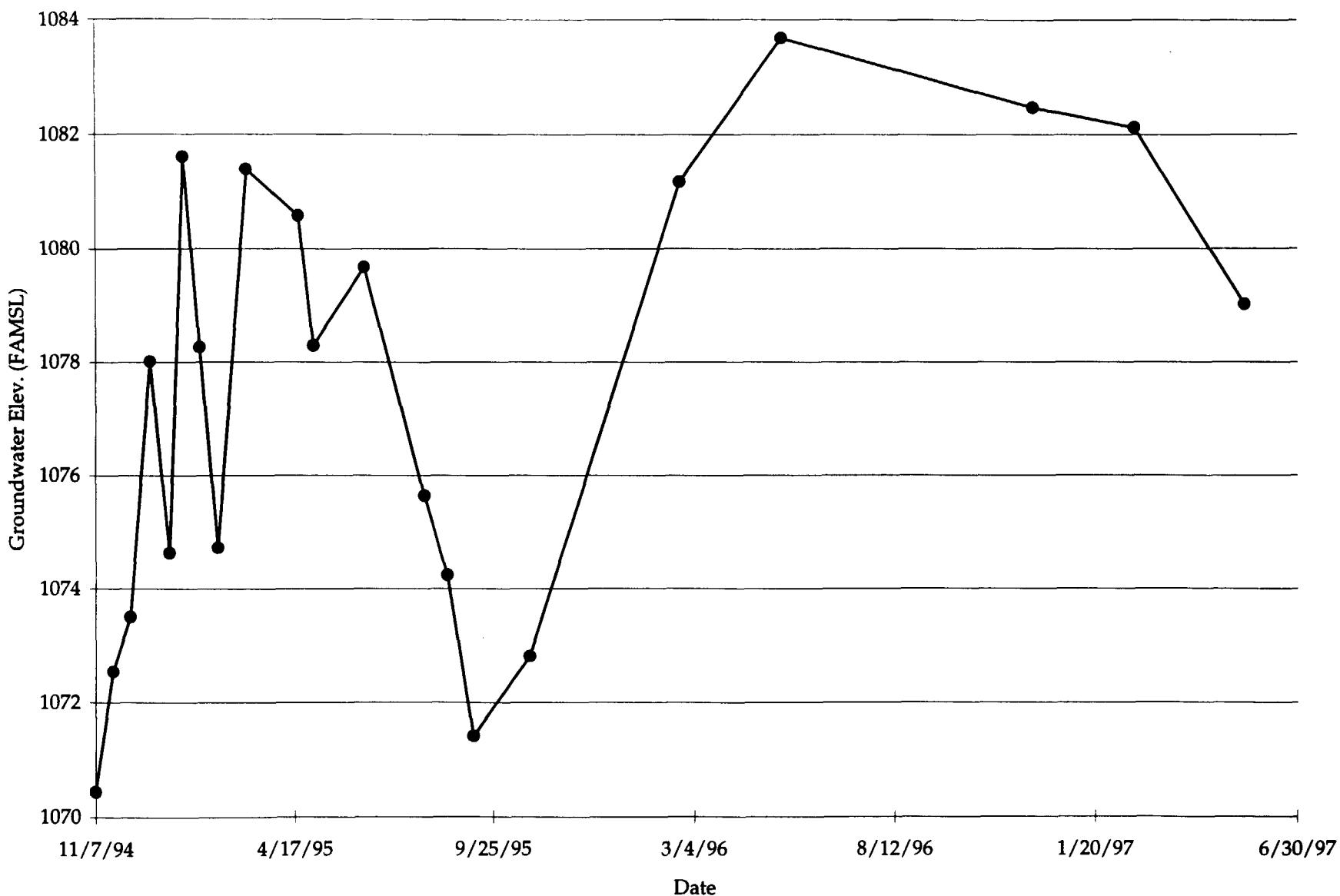
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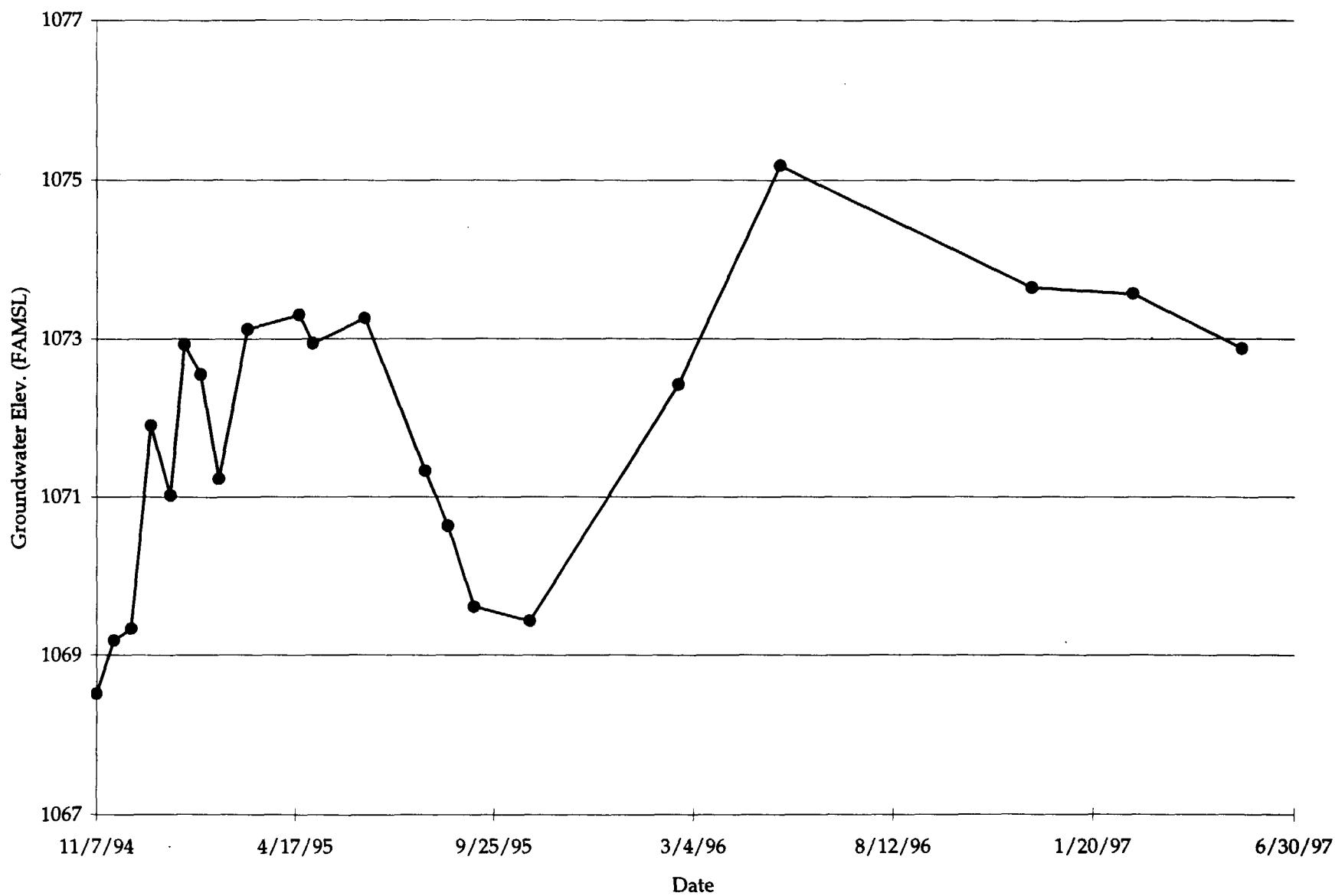
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SUMMIT NATIONAL SUPERFUND SITE



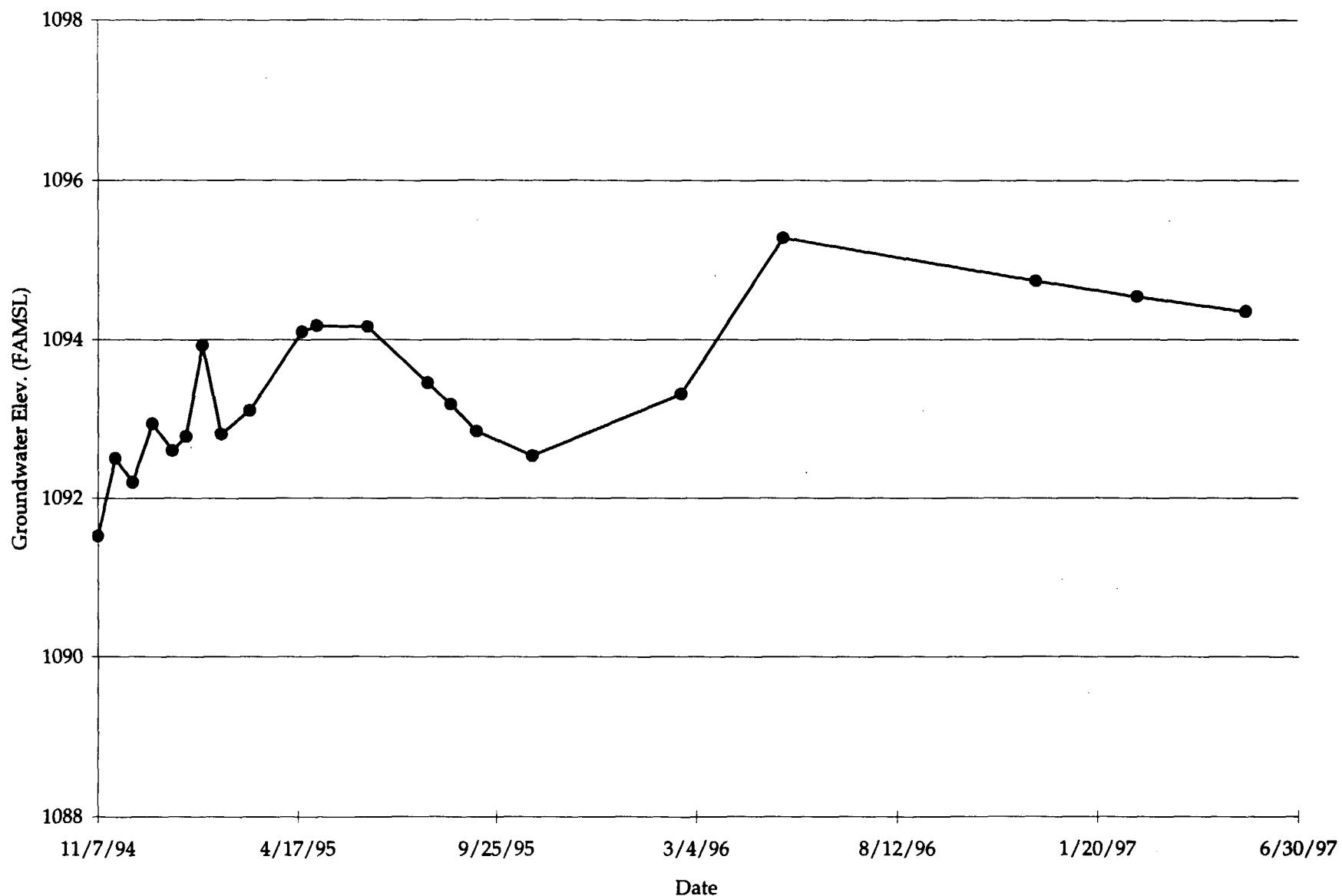
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SUMMIT NATIONAL SUPERFUND SITE



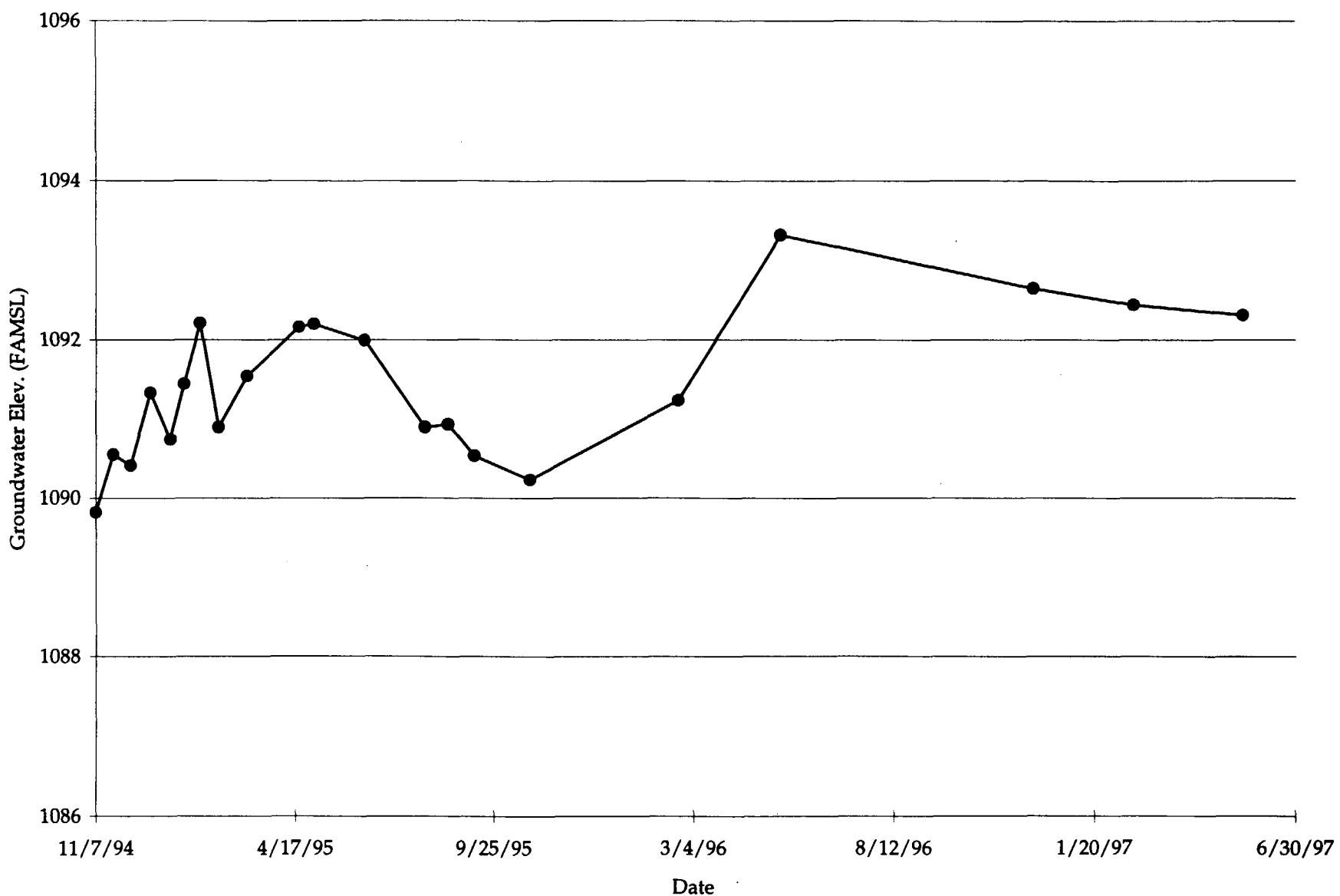
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WATER TABLE UNIT: MW-118
SUMMIT NATIONAL SUPERFUND SITE



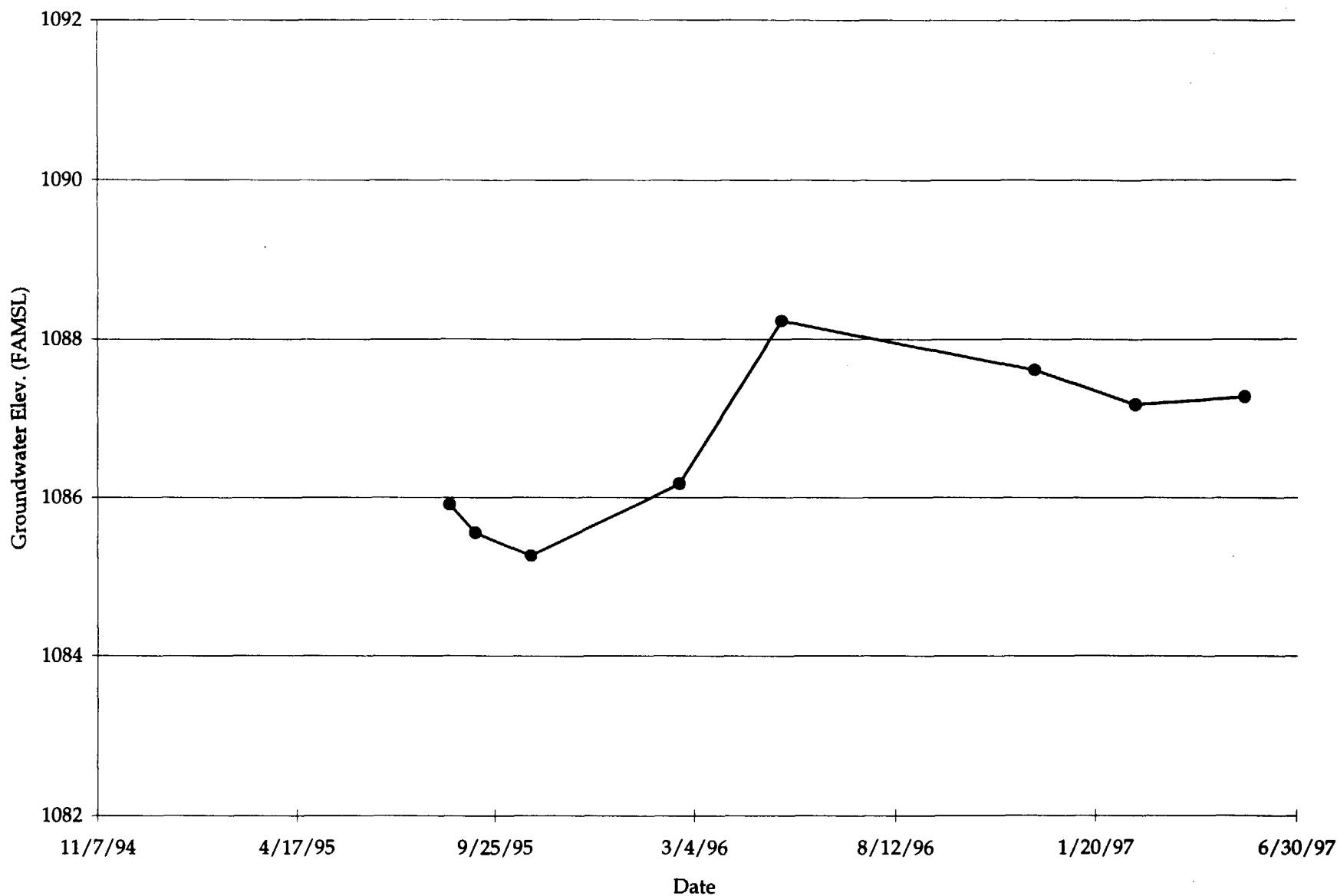
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WATER TABLE UNIT: PZ-1
SUMMIT NATIONAL SUPERFUND SITE



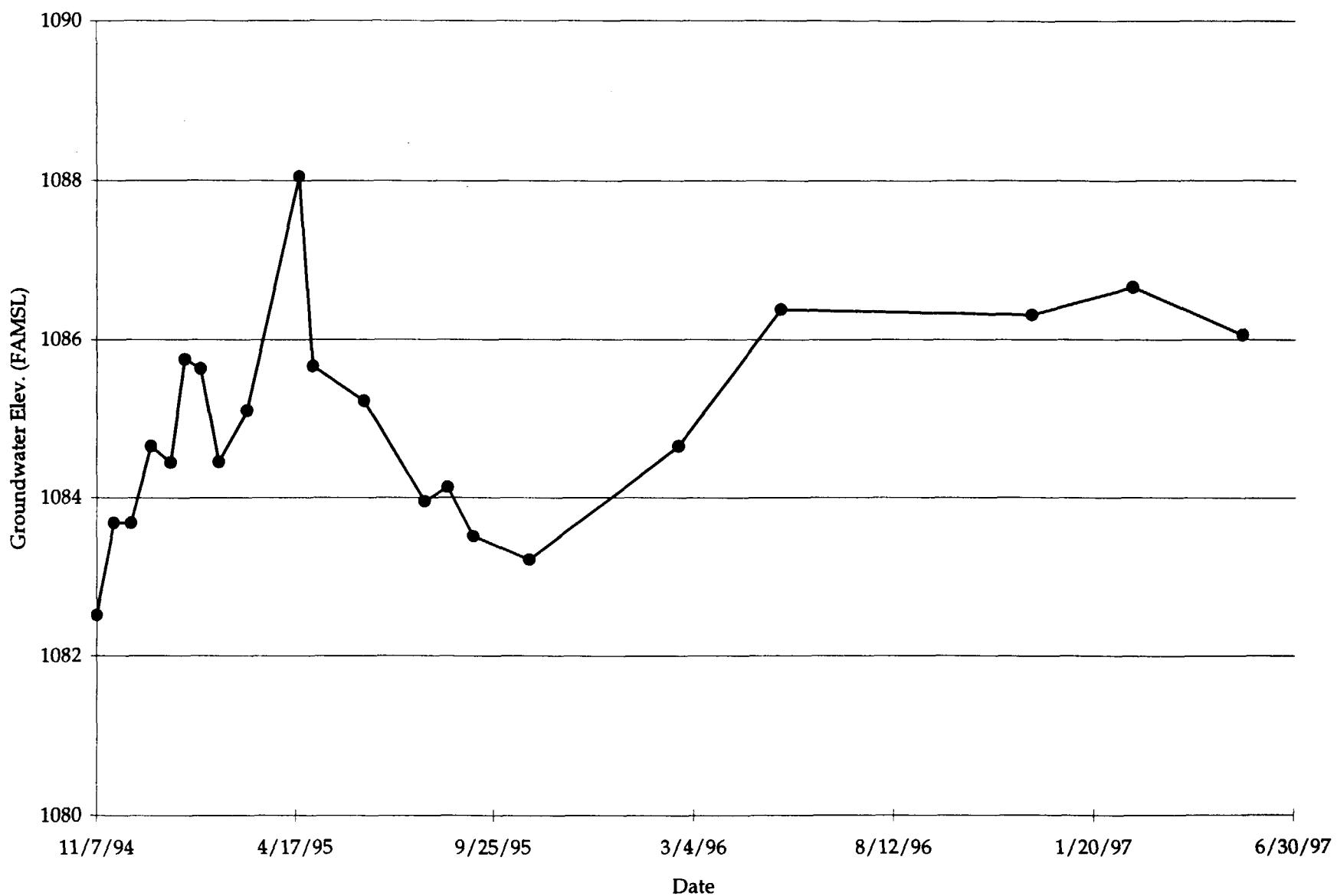
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SUMMIT NATIONAL SUPERFUND SITE



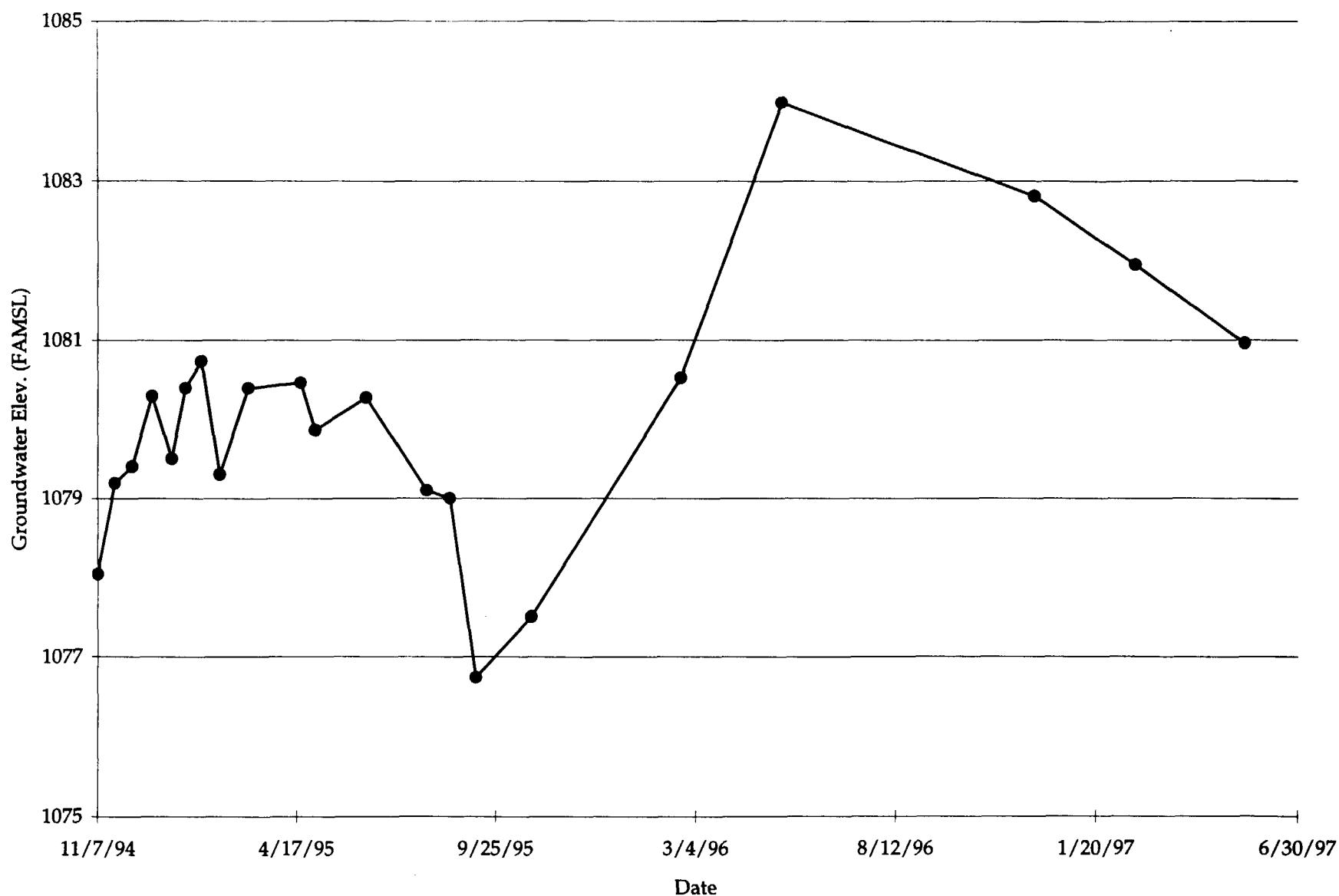
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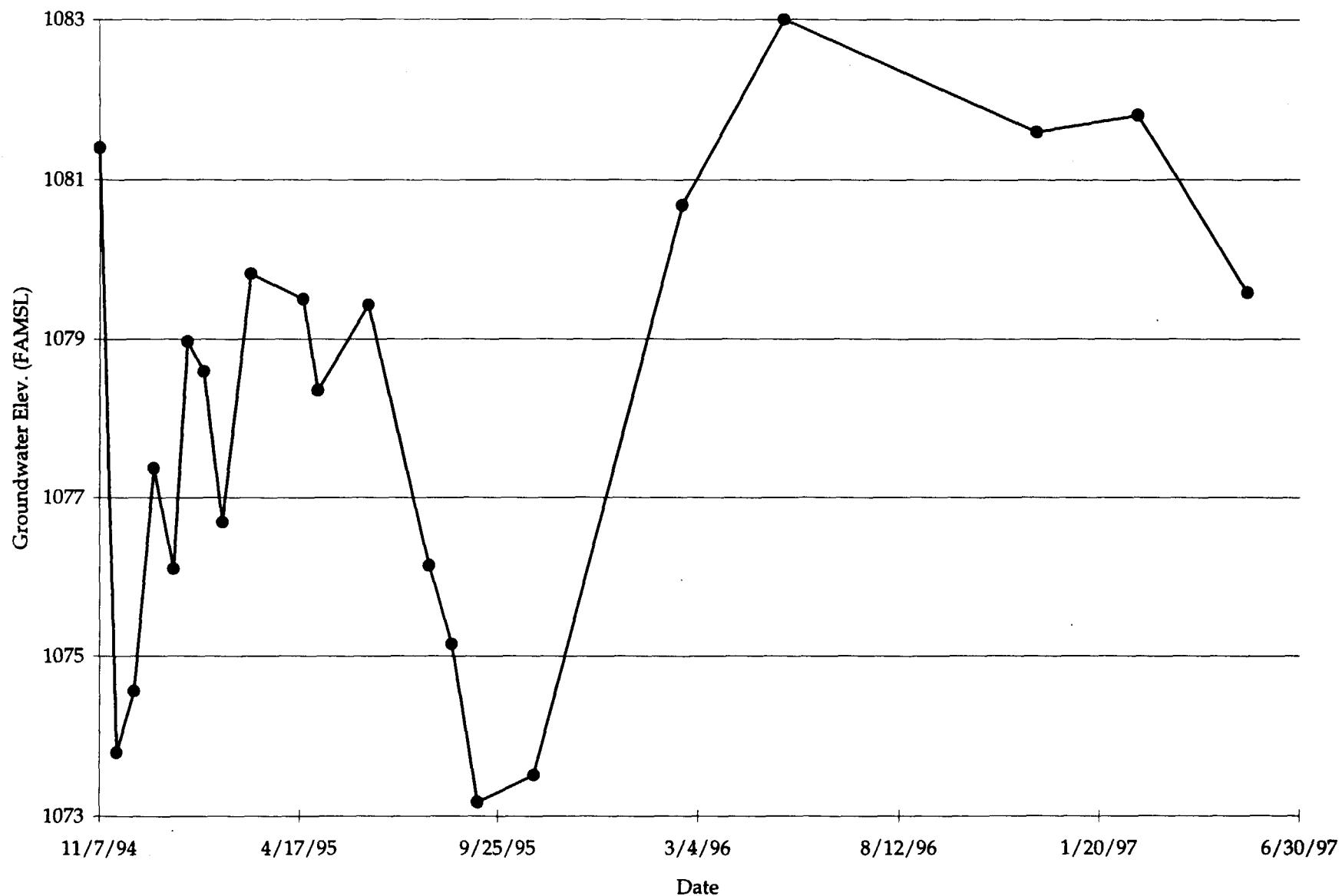
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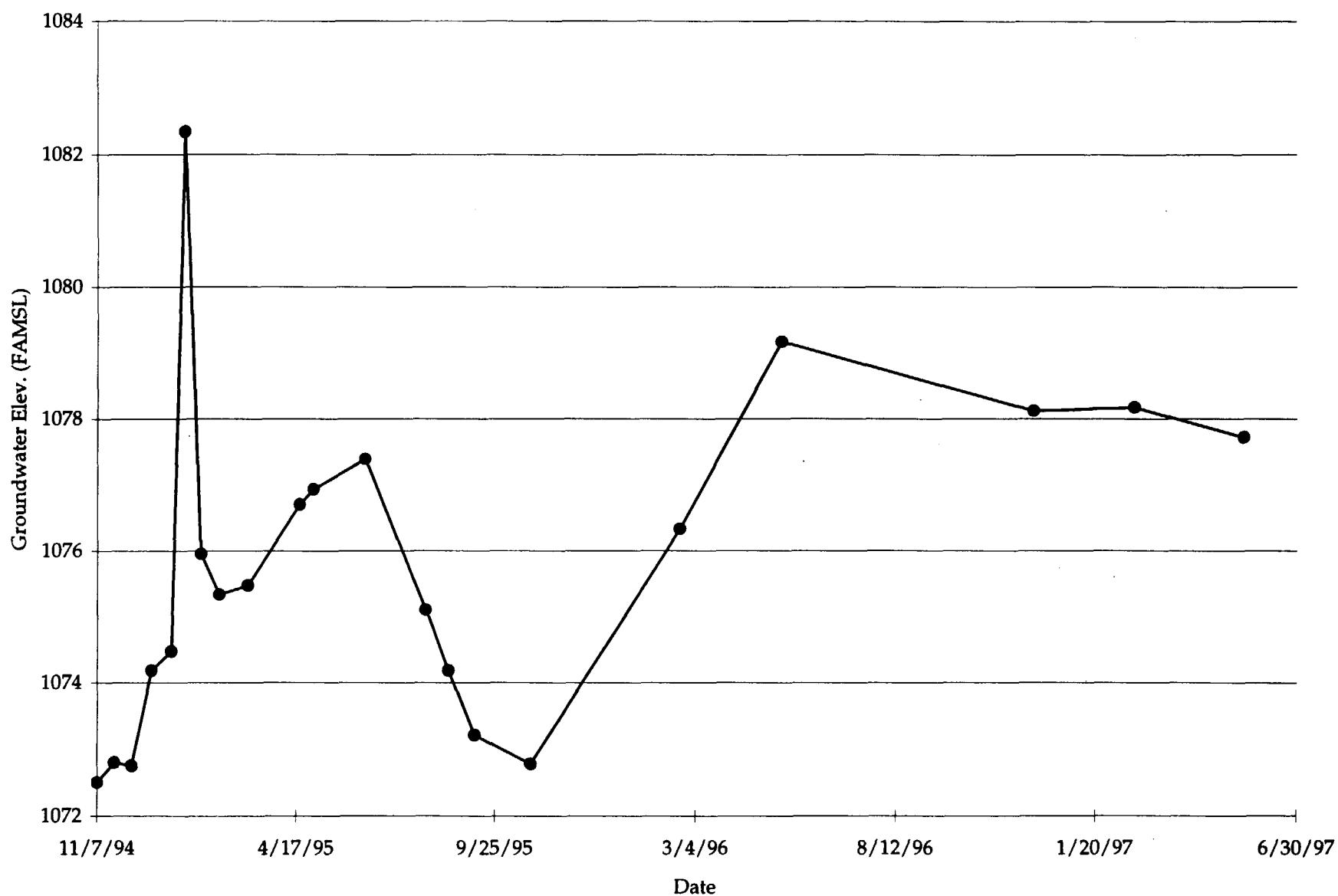
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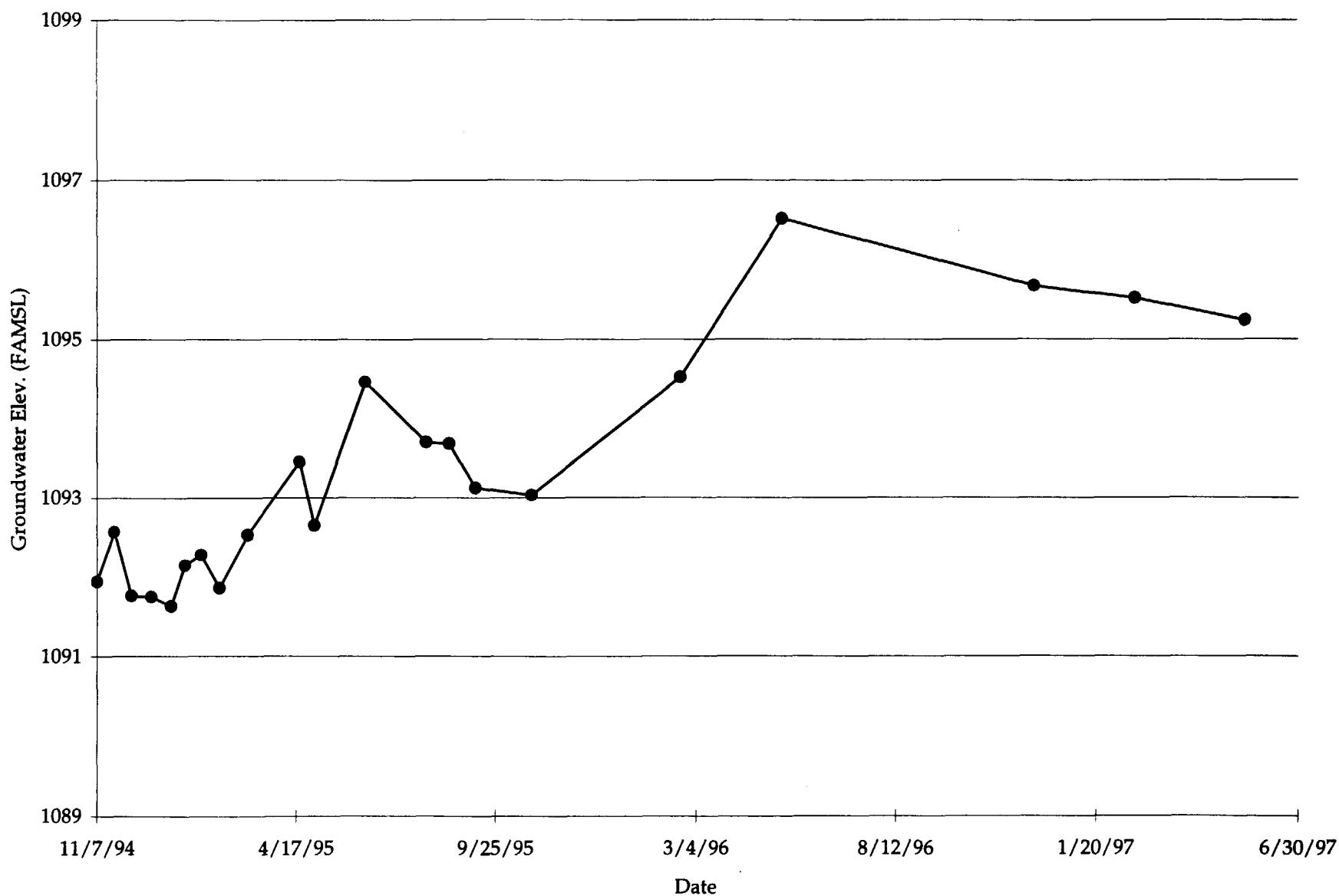
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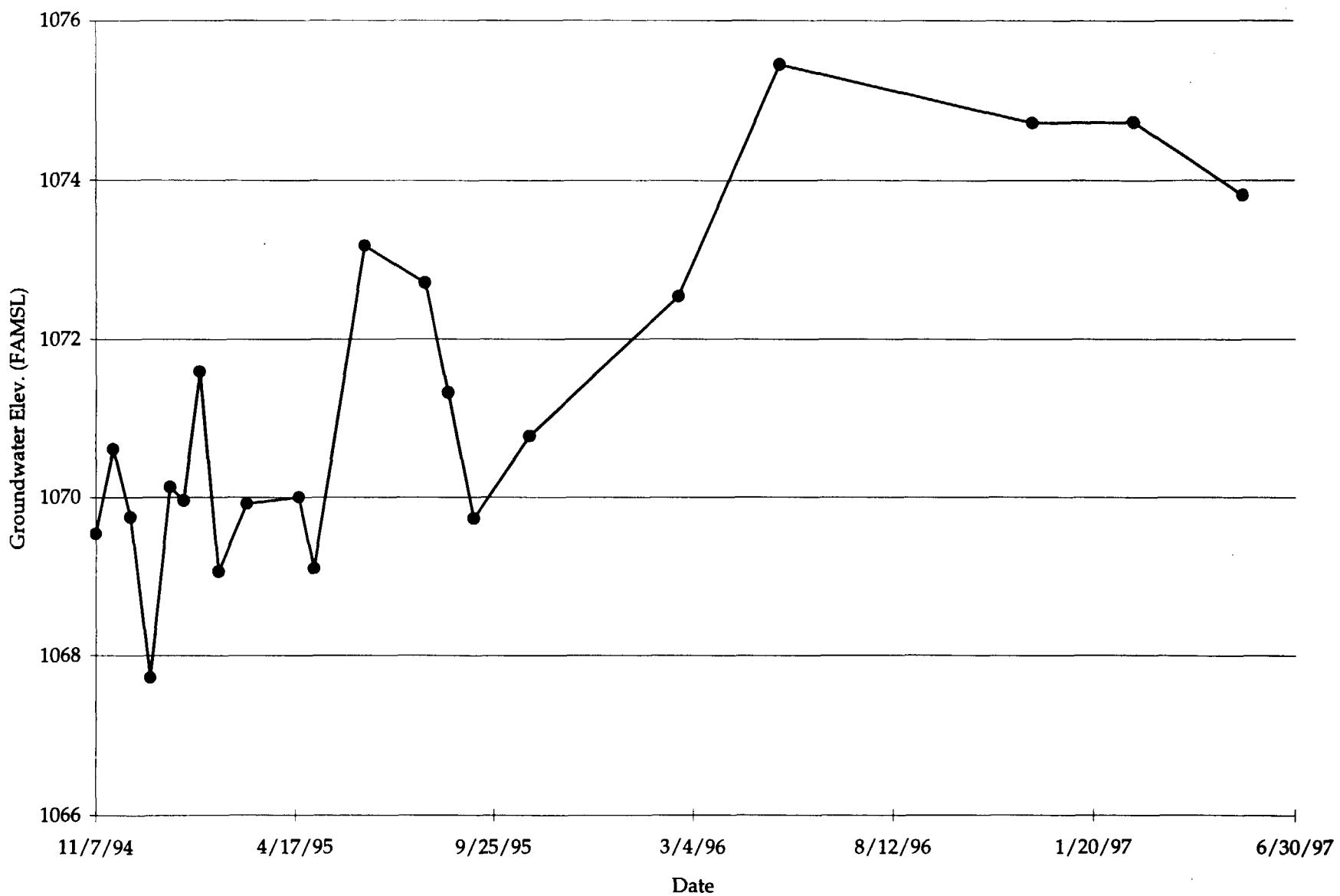
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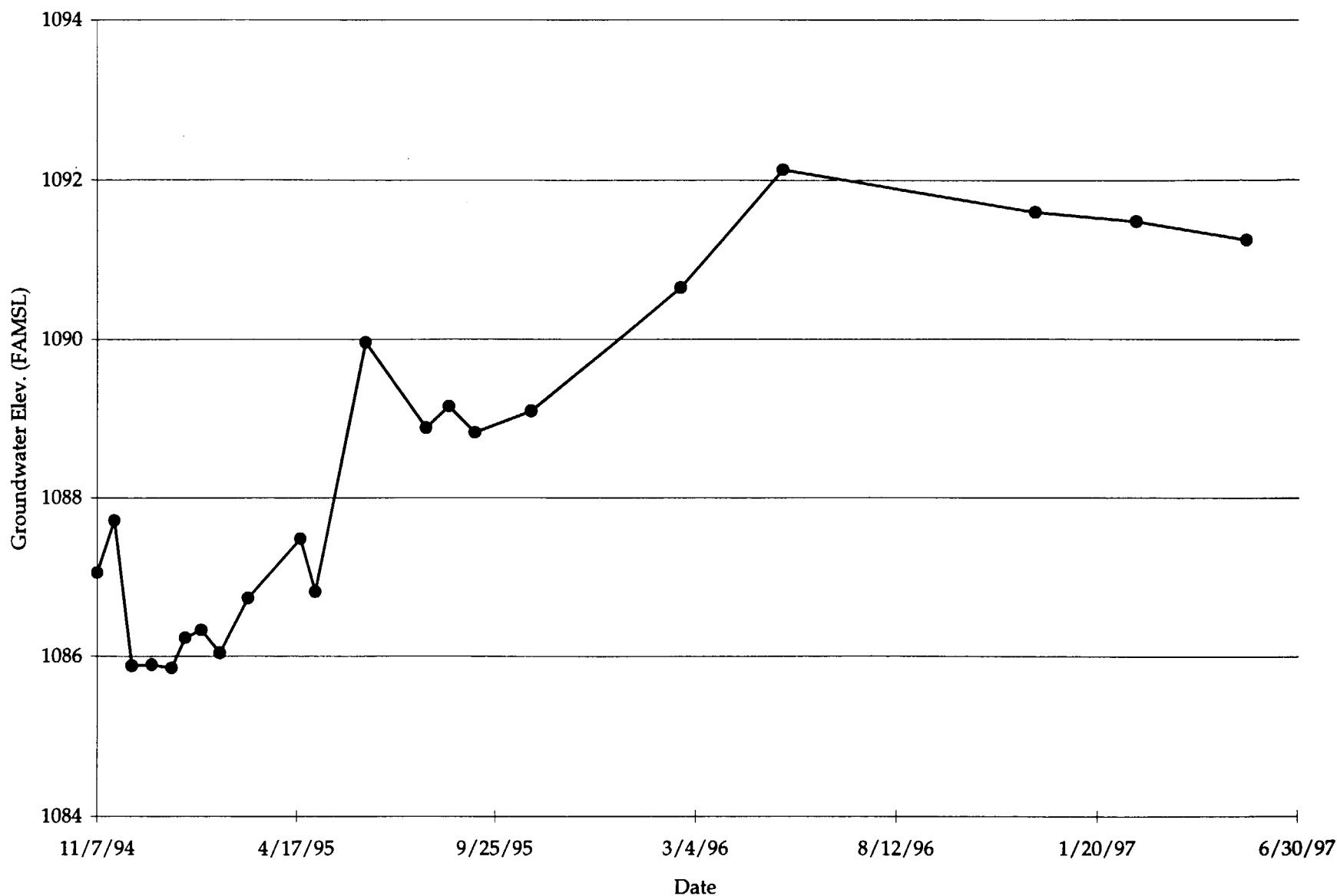
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SUMMIT NATIONAL SUPERFUND SITE



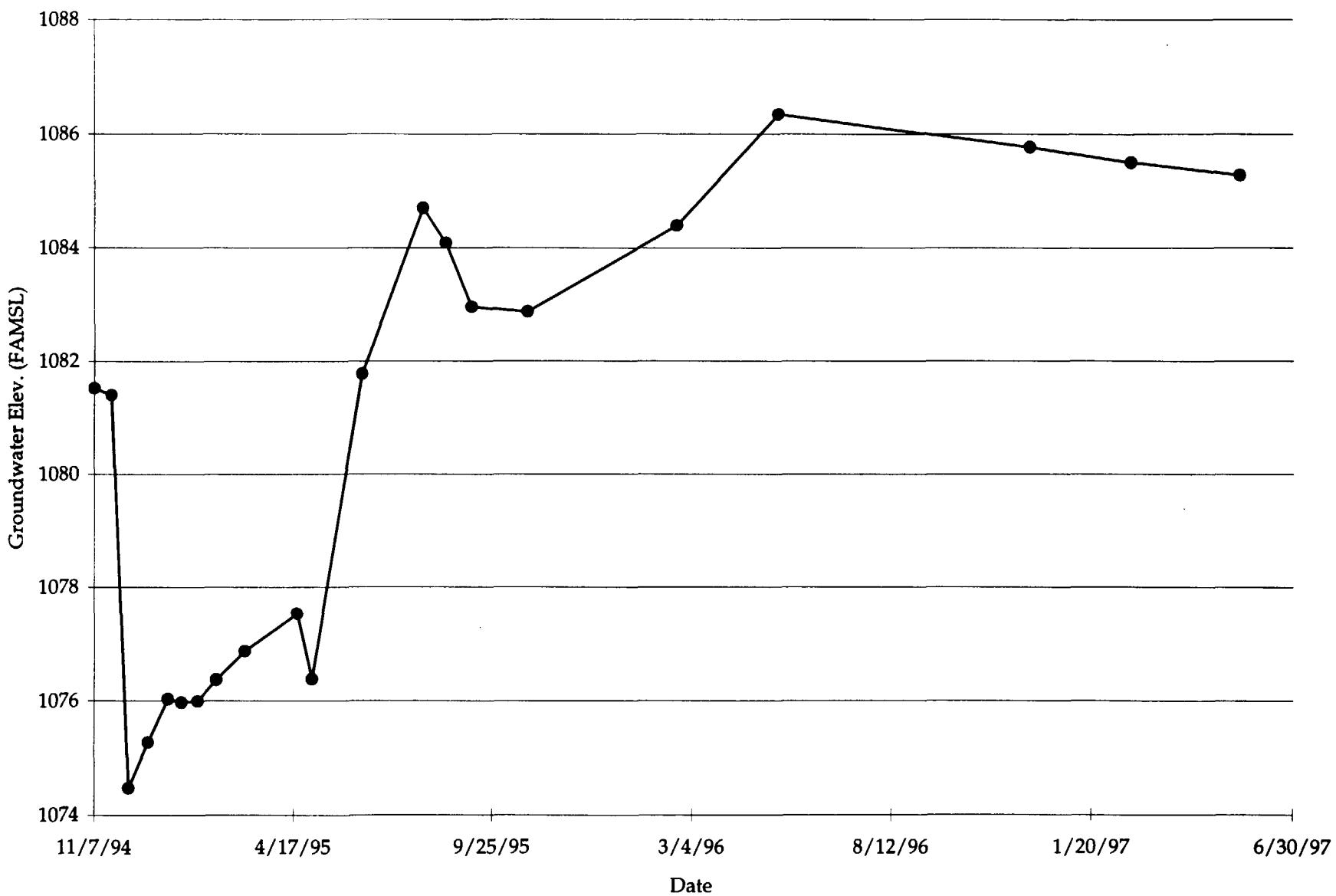
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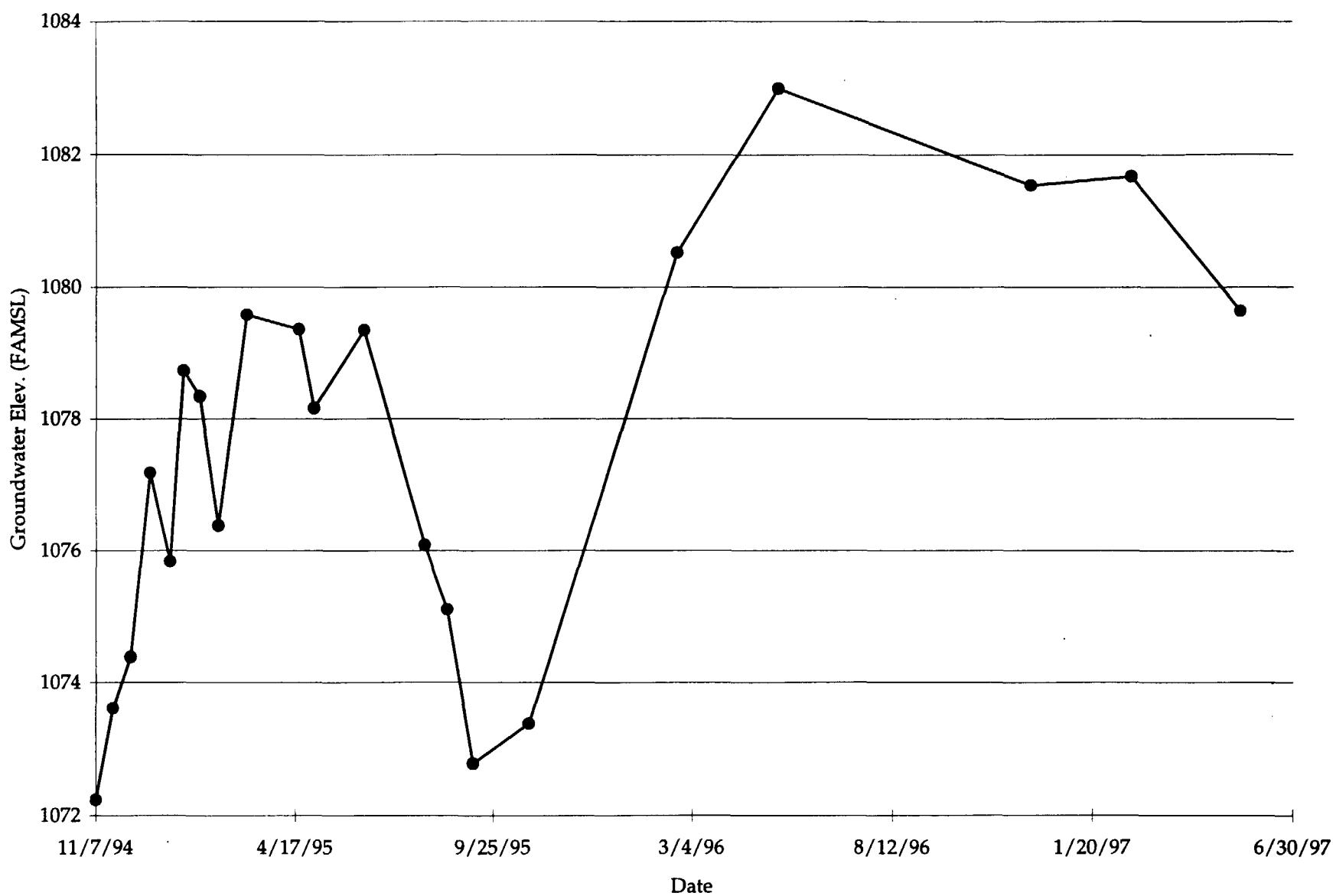
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UPPER INTERMEDIATE UNIT: MW-203
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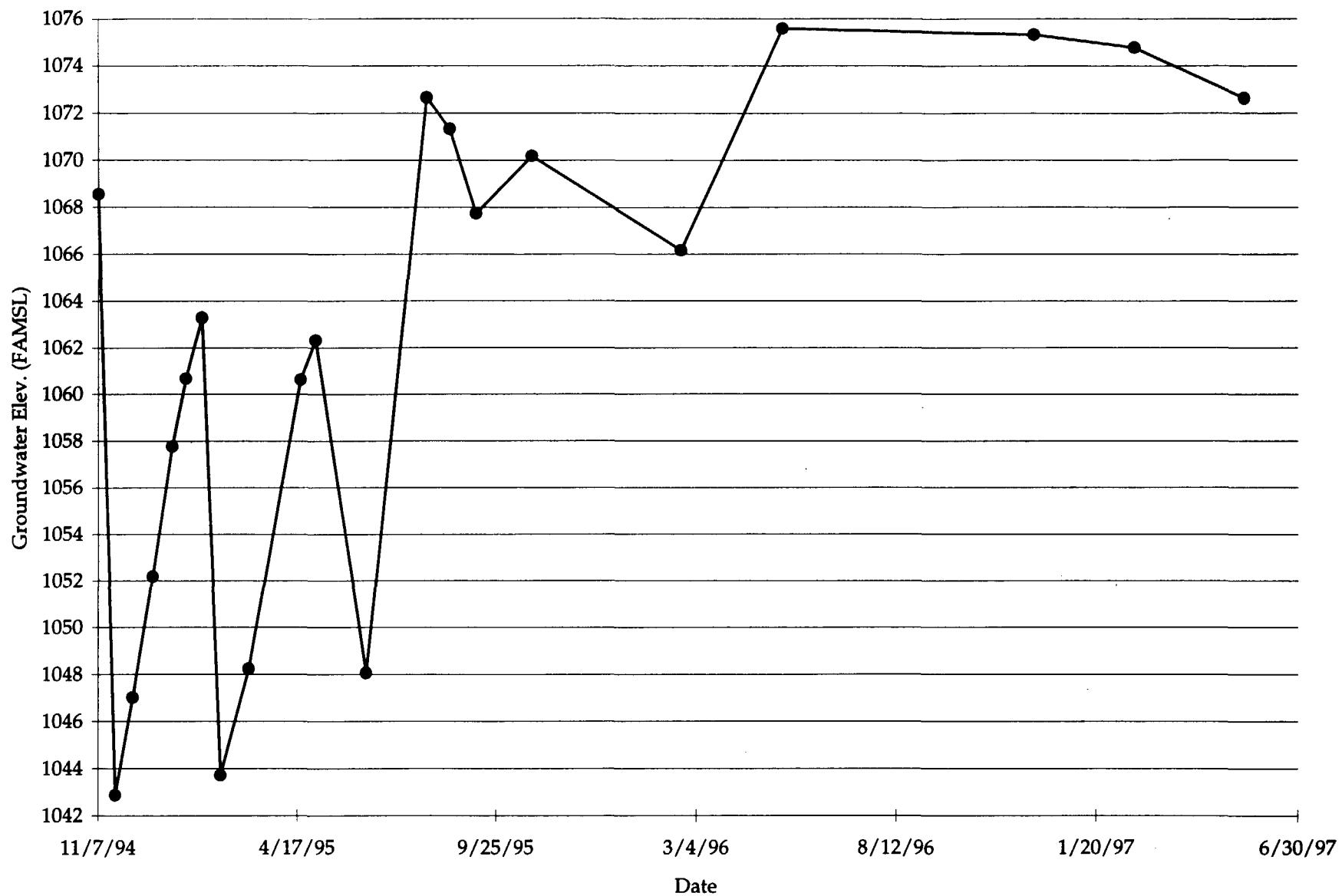
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UPPER INTERMEDIATE UNIT: MW-204
SUMMIT NATIONAL SUPERFUND SITE



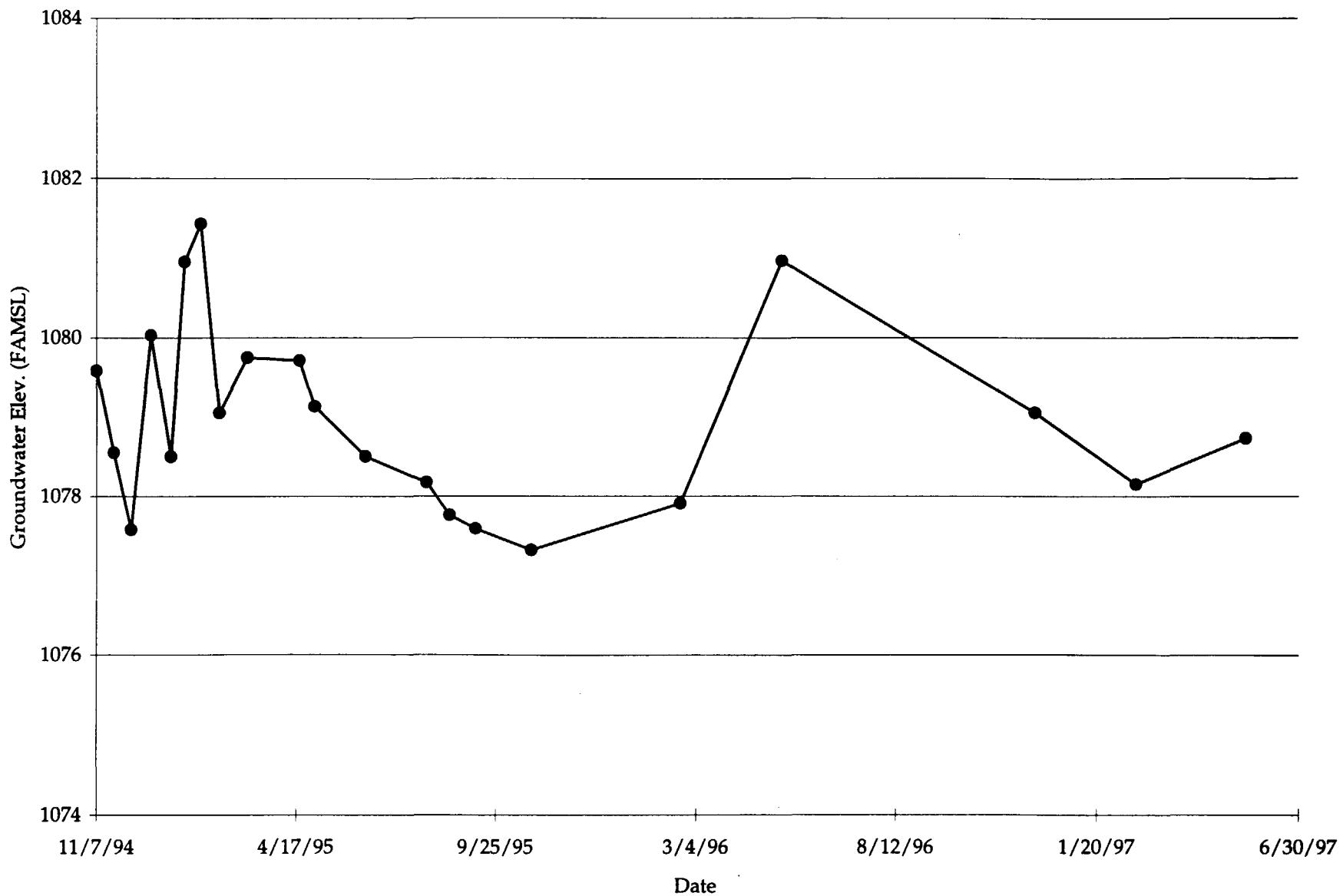
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SUMMIT NATIONAL SUPERFUND SITE



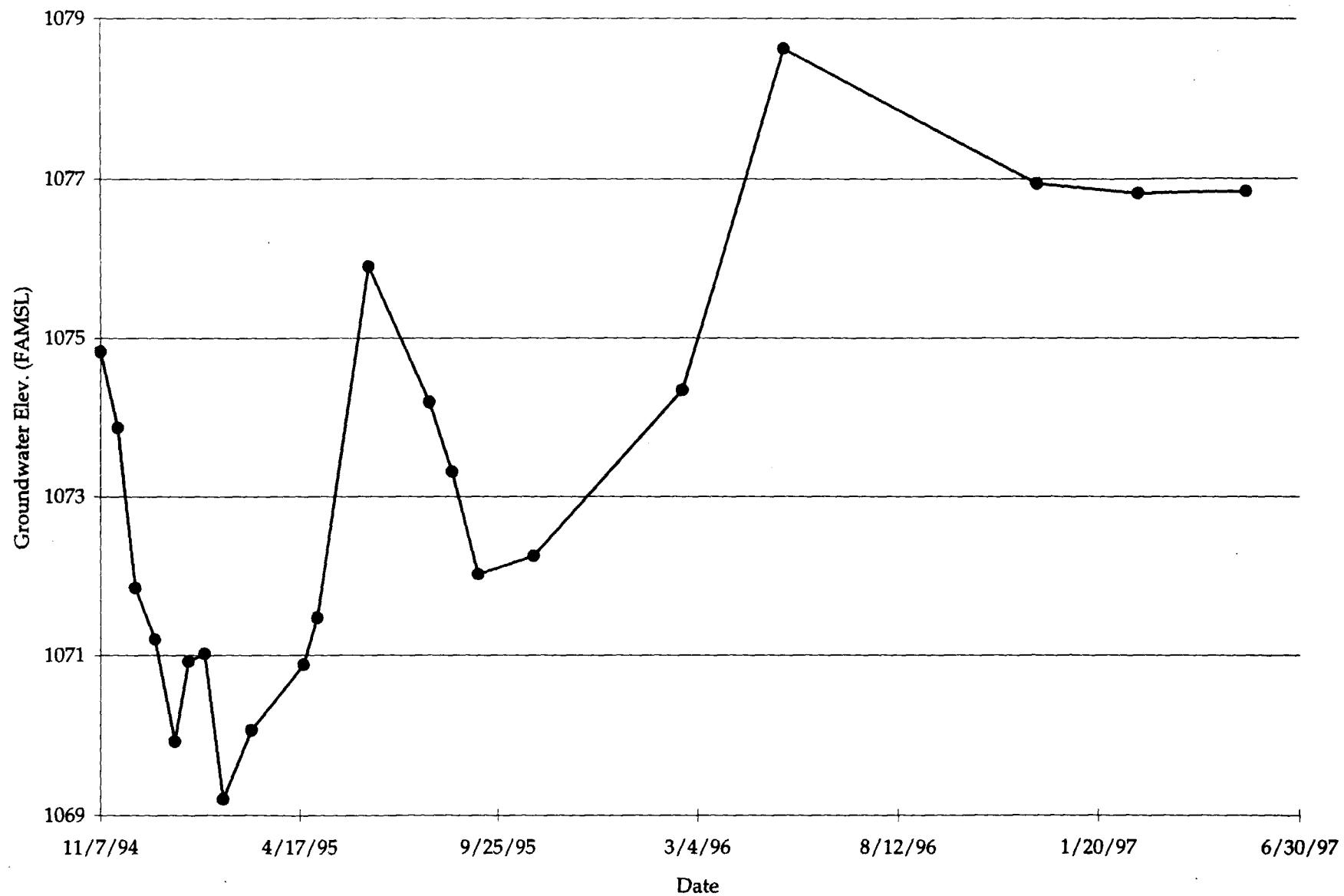
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UPPER INTERMEDIATE UNIT: MW-206
SUMMIT NATIONAL SUPERFUND SITE



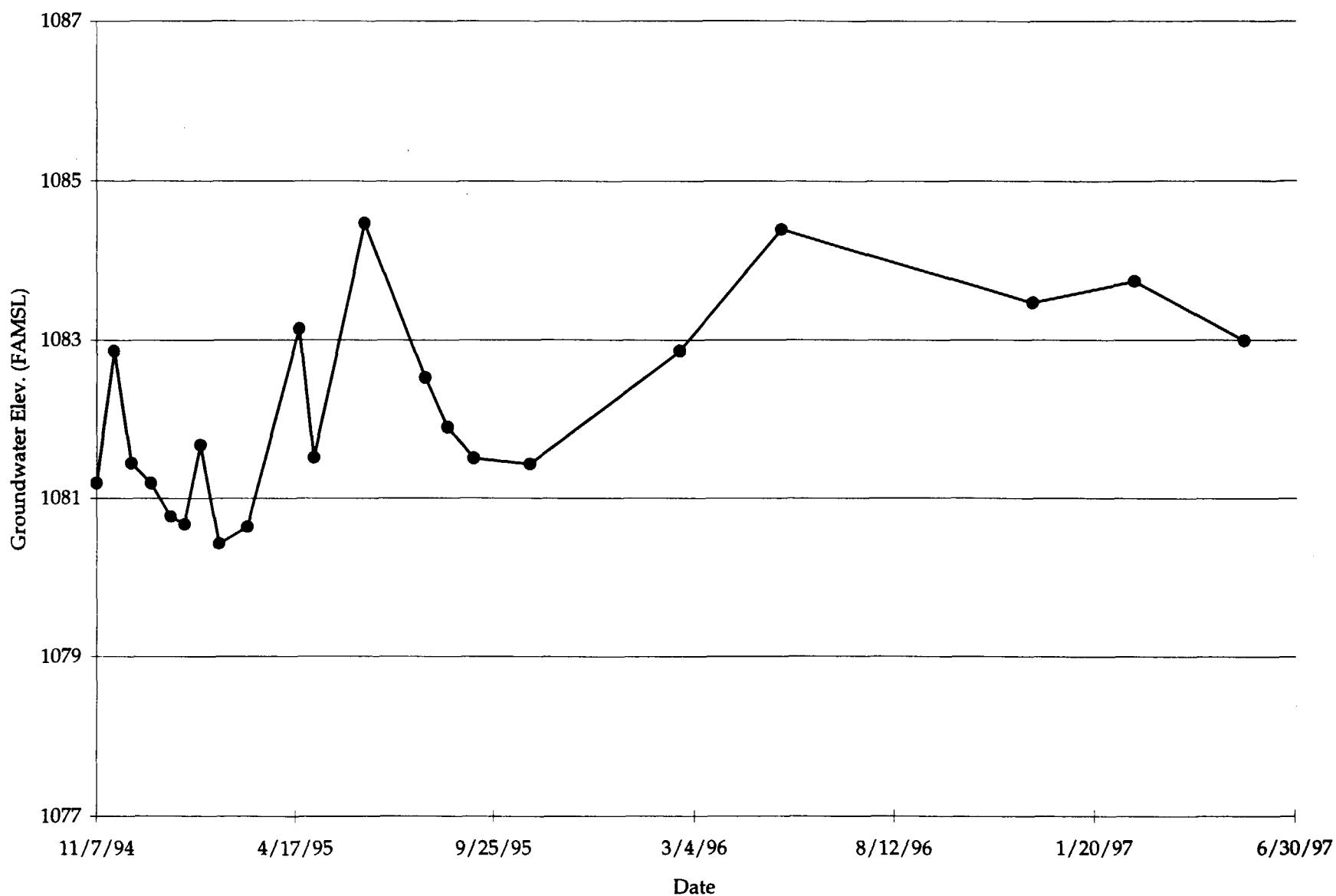
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UPPER INTERMEDIATE UNIT: MW-207
SUMMIT NATIONAL SUPERFUND SITE



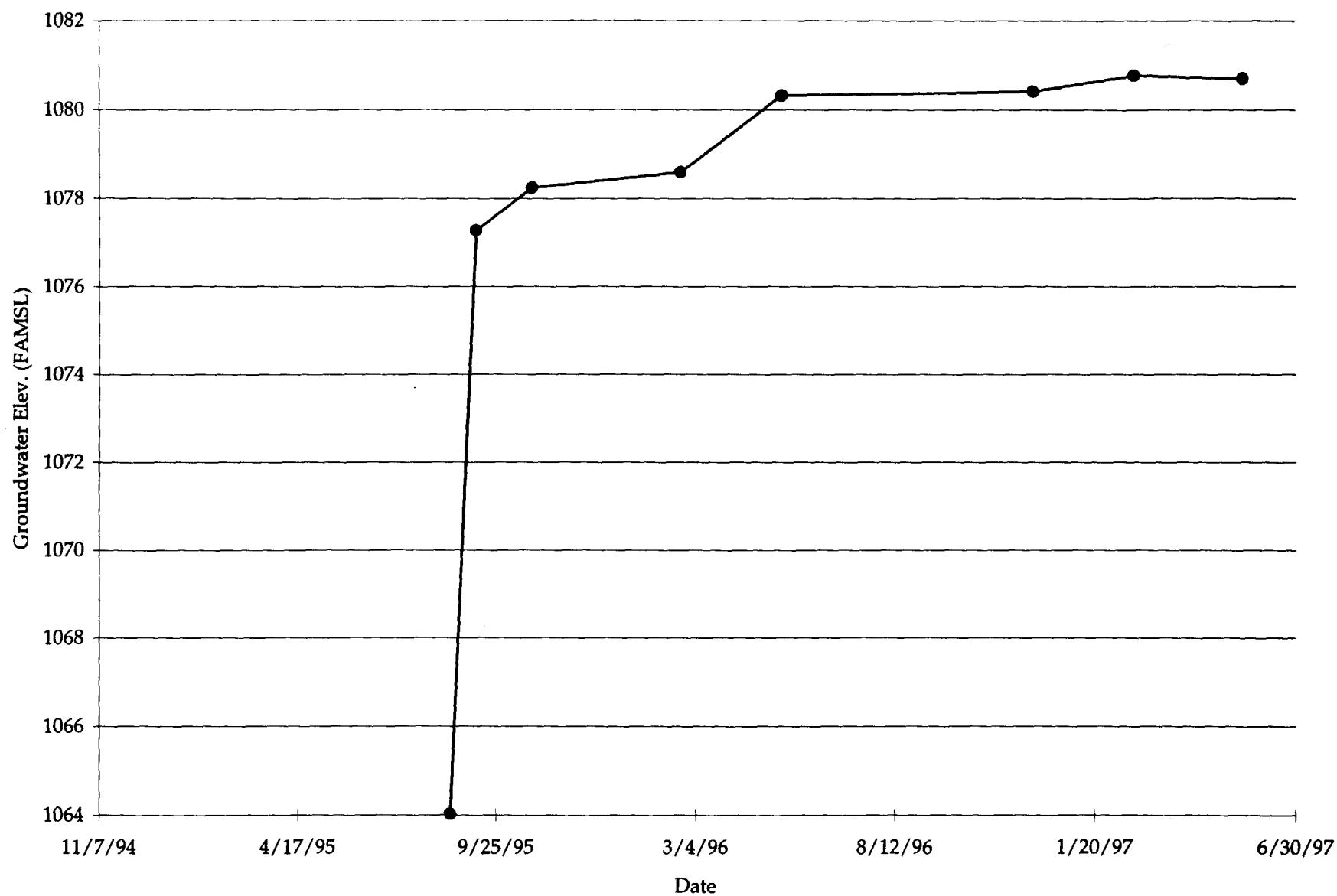
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UPPER INTERMEDIATE UNIT: MW-209
SUMMIT NATIONAL SUPERFUND SITE



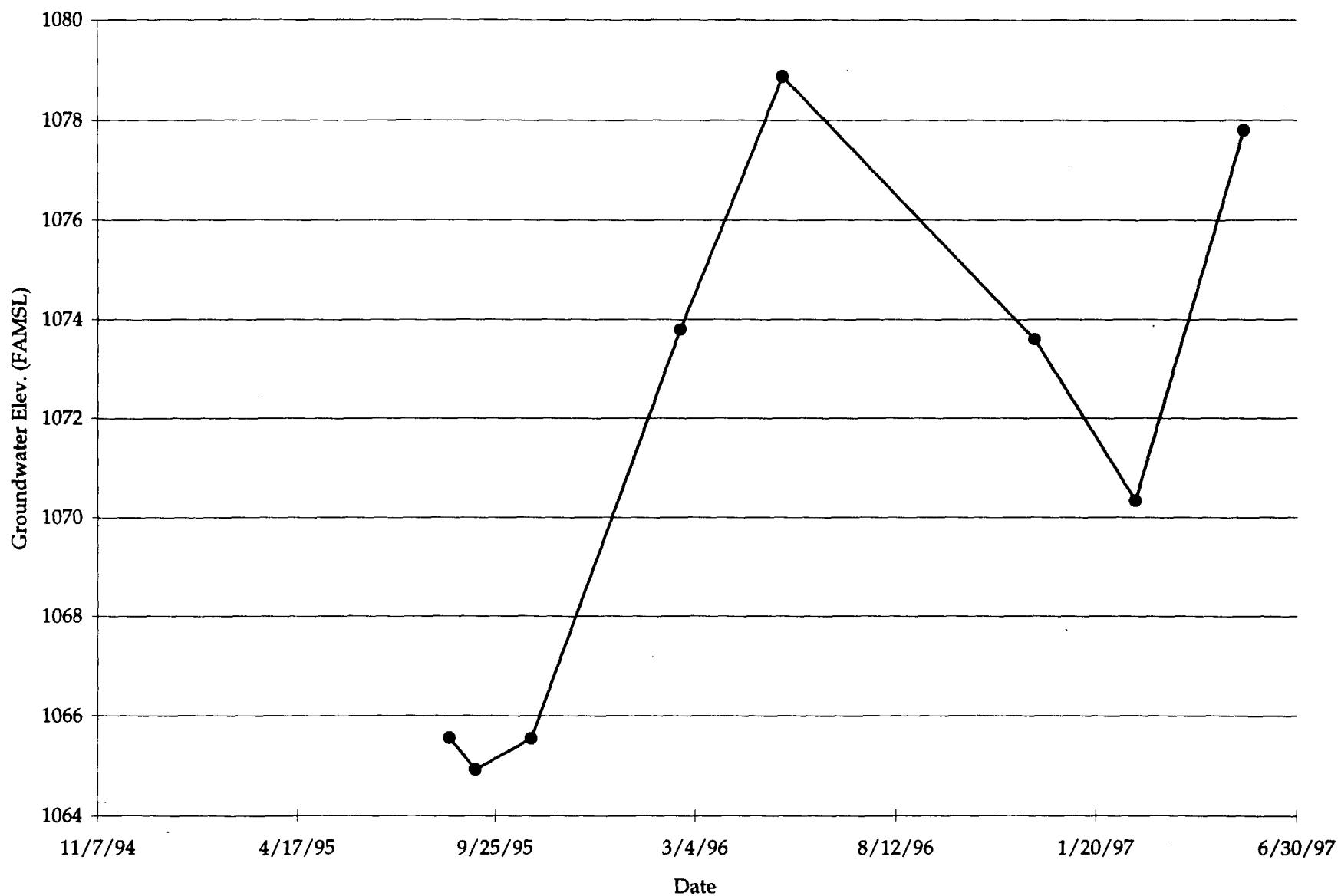
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UPPER INTERMEDIATE UNIT: MW-219
SUMMIT NATIONAL SUPERFUND SITE



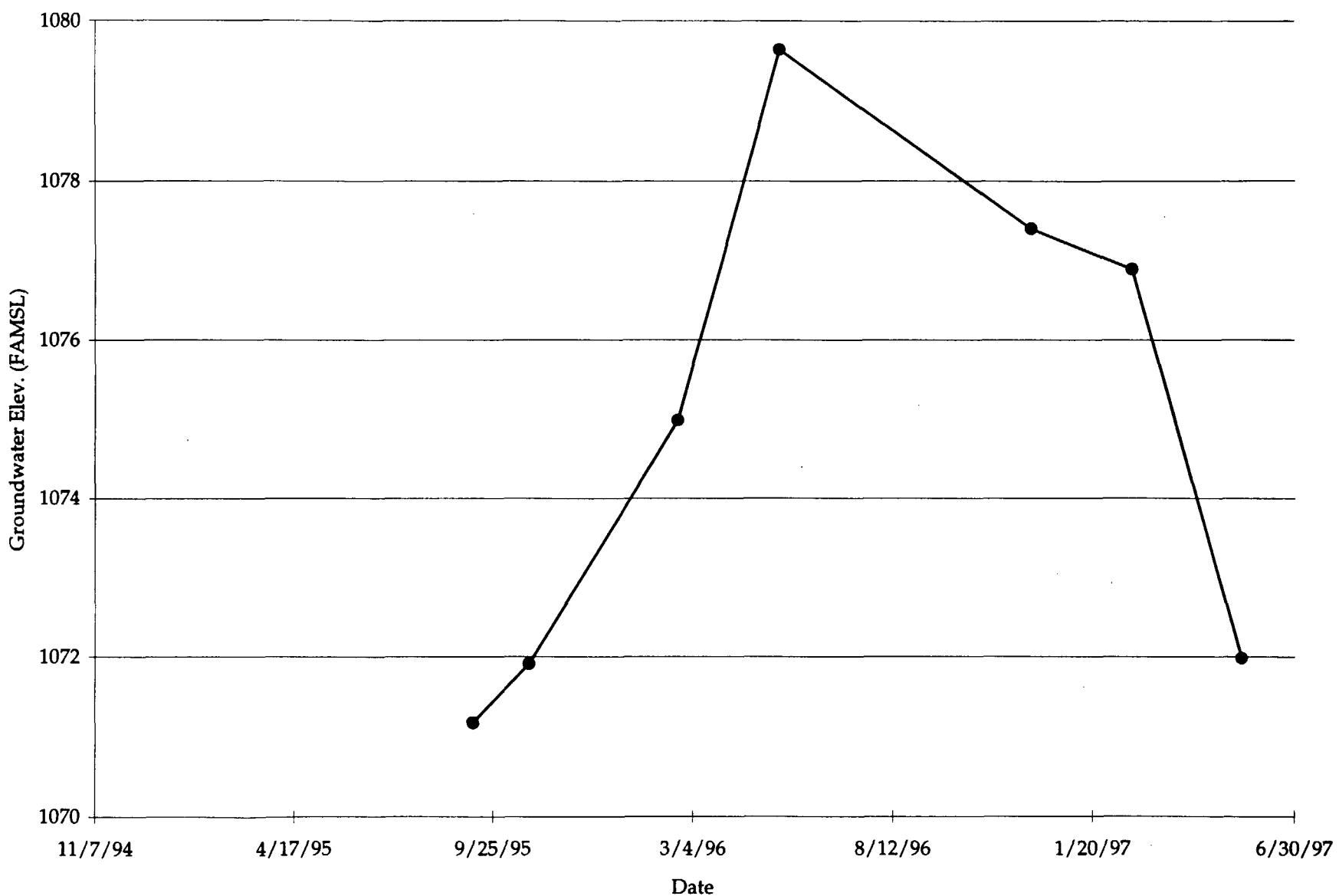
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UPPER INTERMEDIATE UNIT: MW-220
SUMMIT NATIONAL SUPERFUND SITE



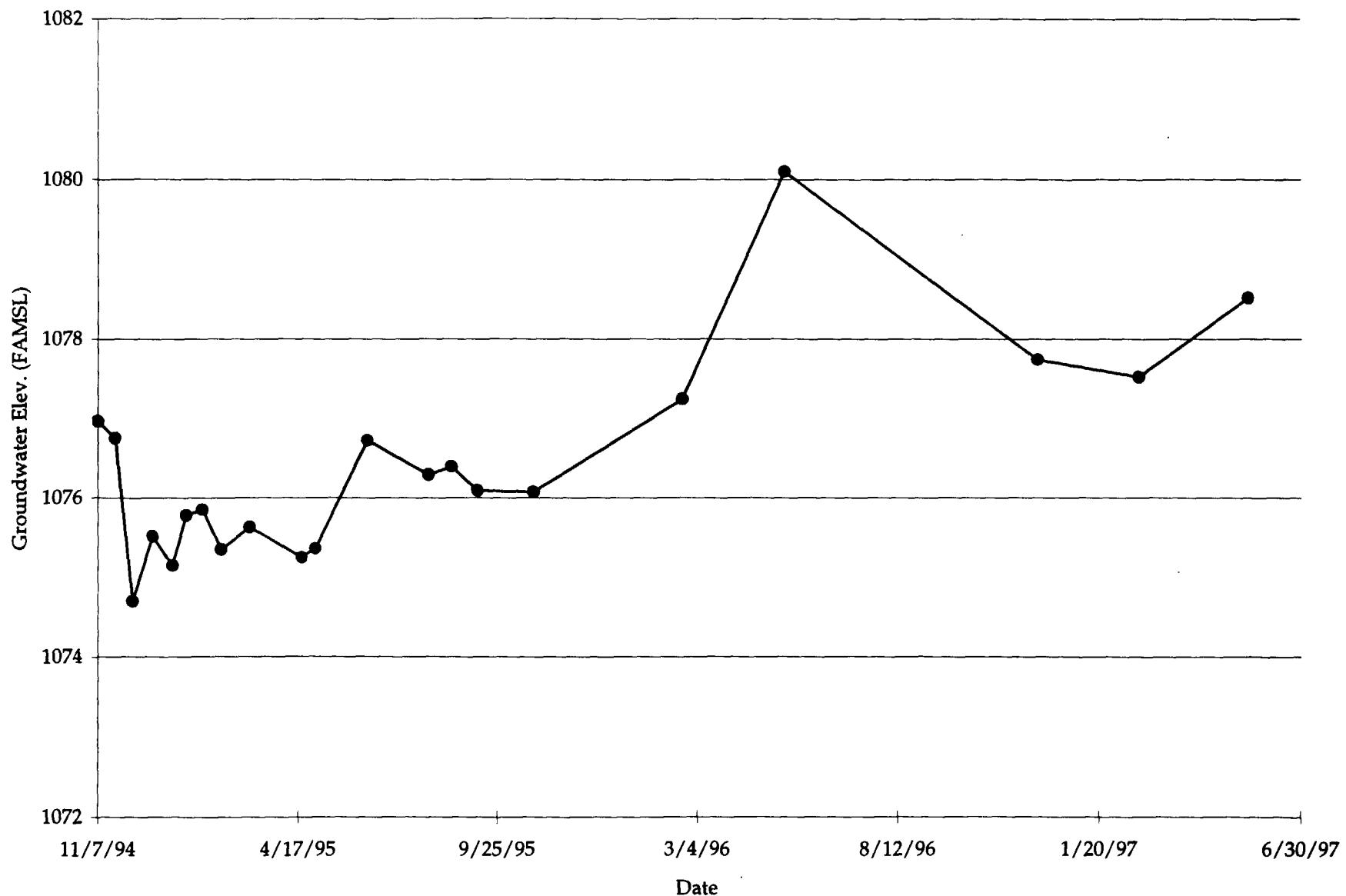
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SUMMIT NATIONAL SUPERFUND SITE



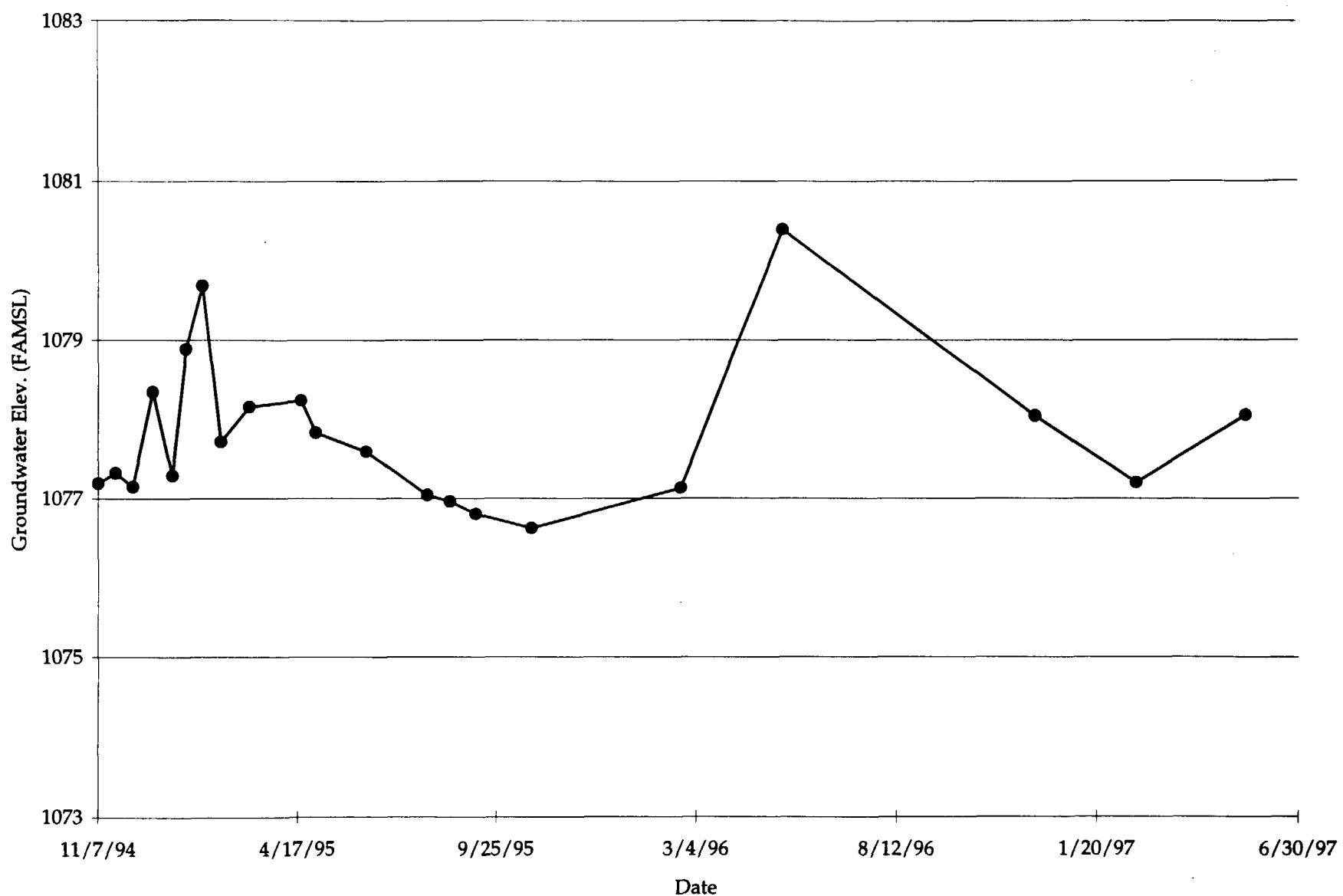
GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-224
SUMMIT NATIONAL SUPERFUND SITE



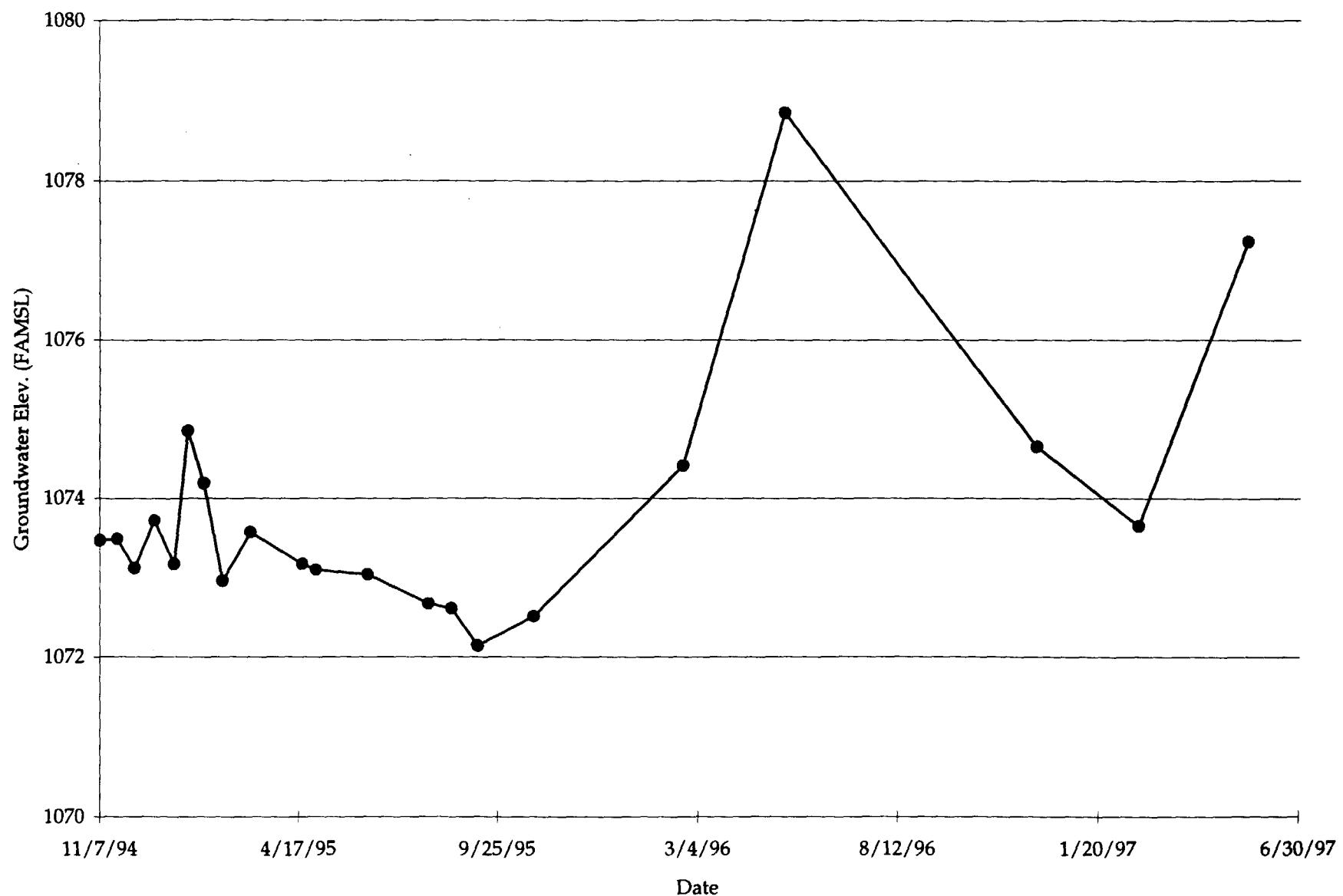
GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: PZ-201
SUMMIT NATIONAL SUPERFUND SITE



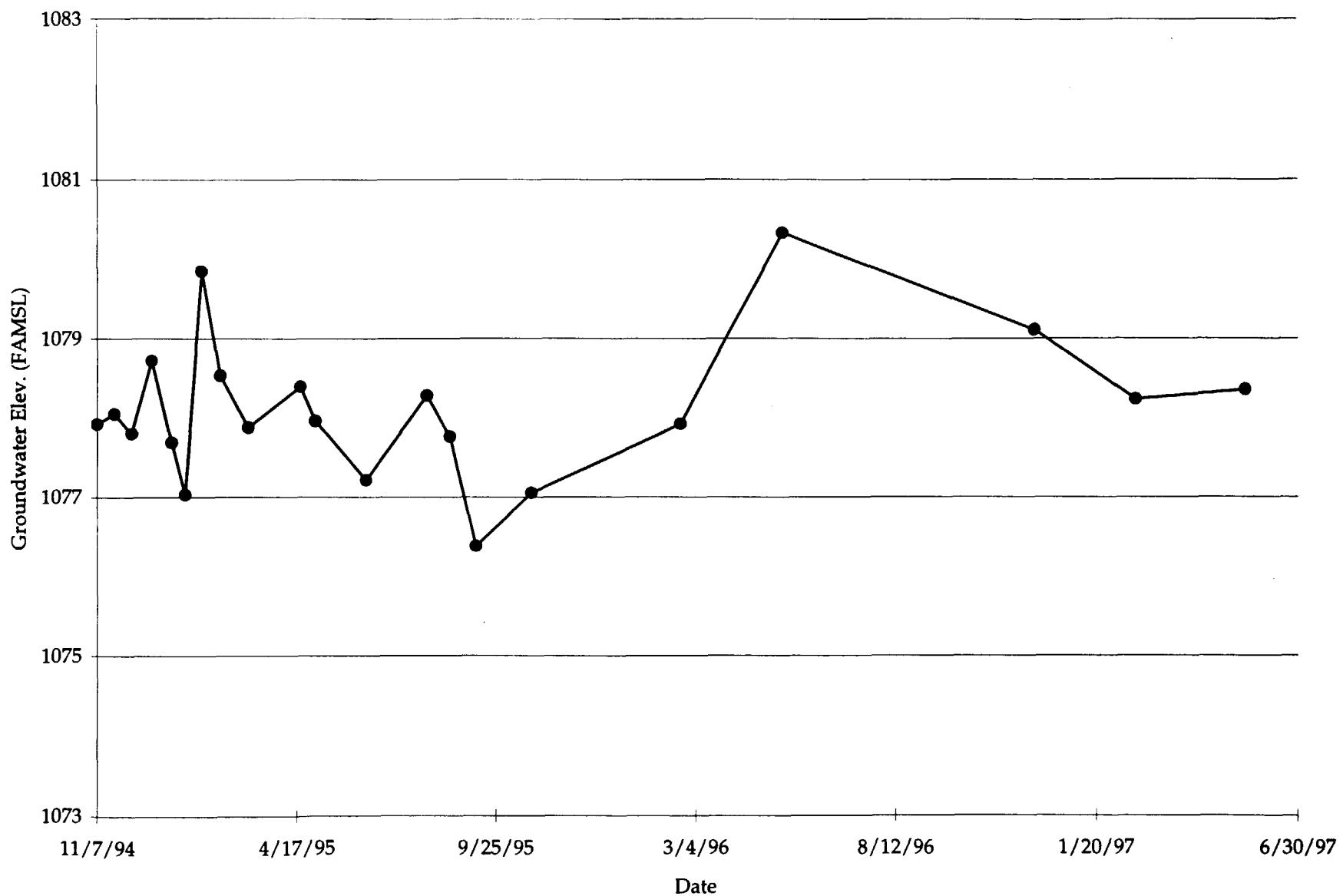
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SUMMIT NATIONAL SUPERFUND SITE



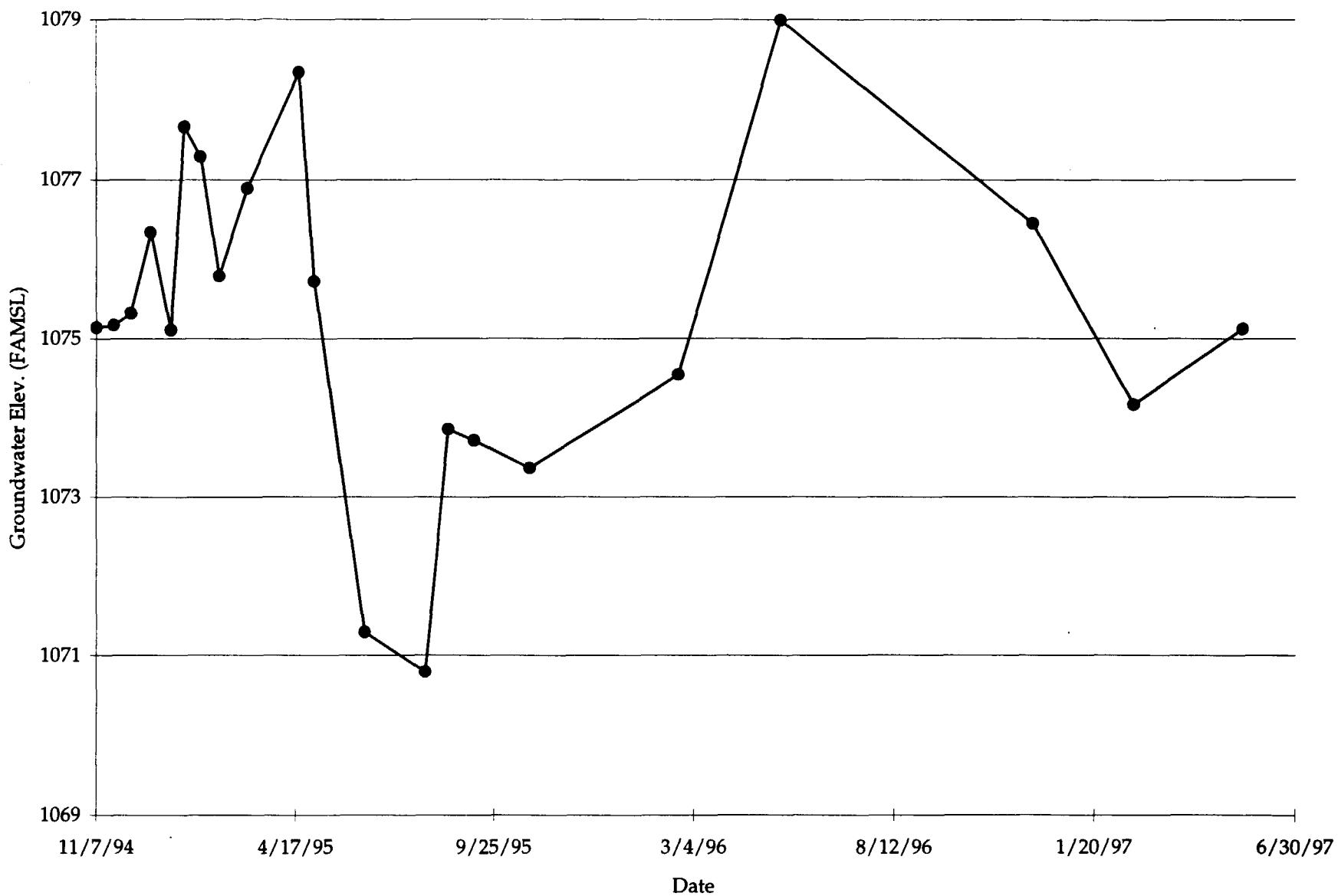
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SUMMIT NATIONAL SUPERFUND SITE



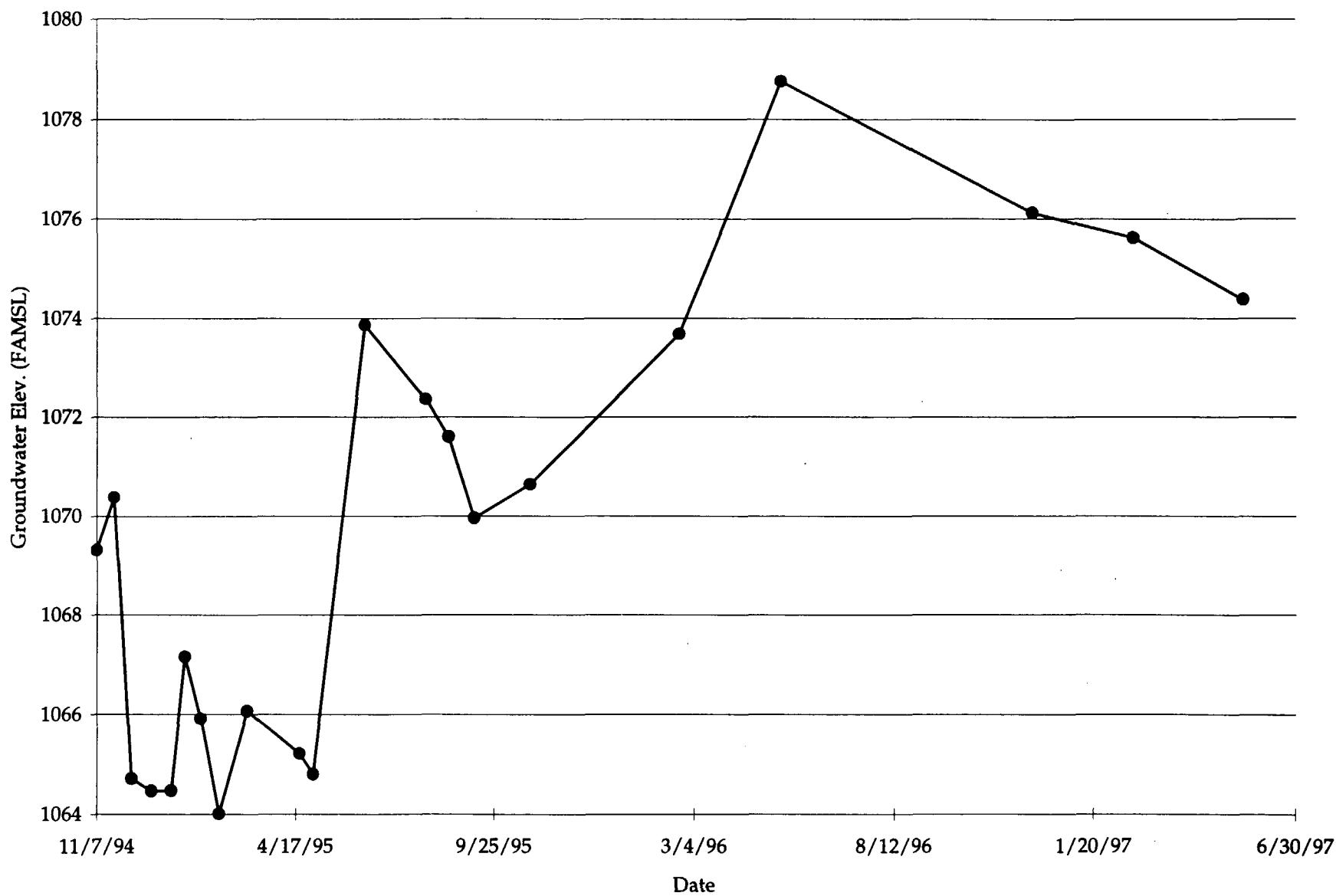
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SUMMIT NATIONAL SUPERFUND SITE



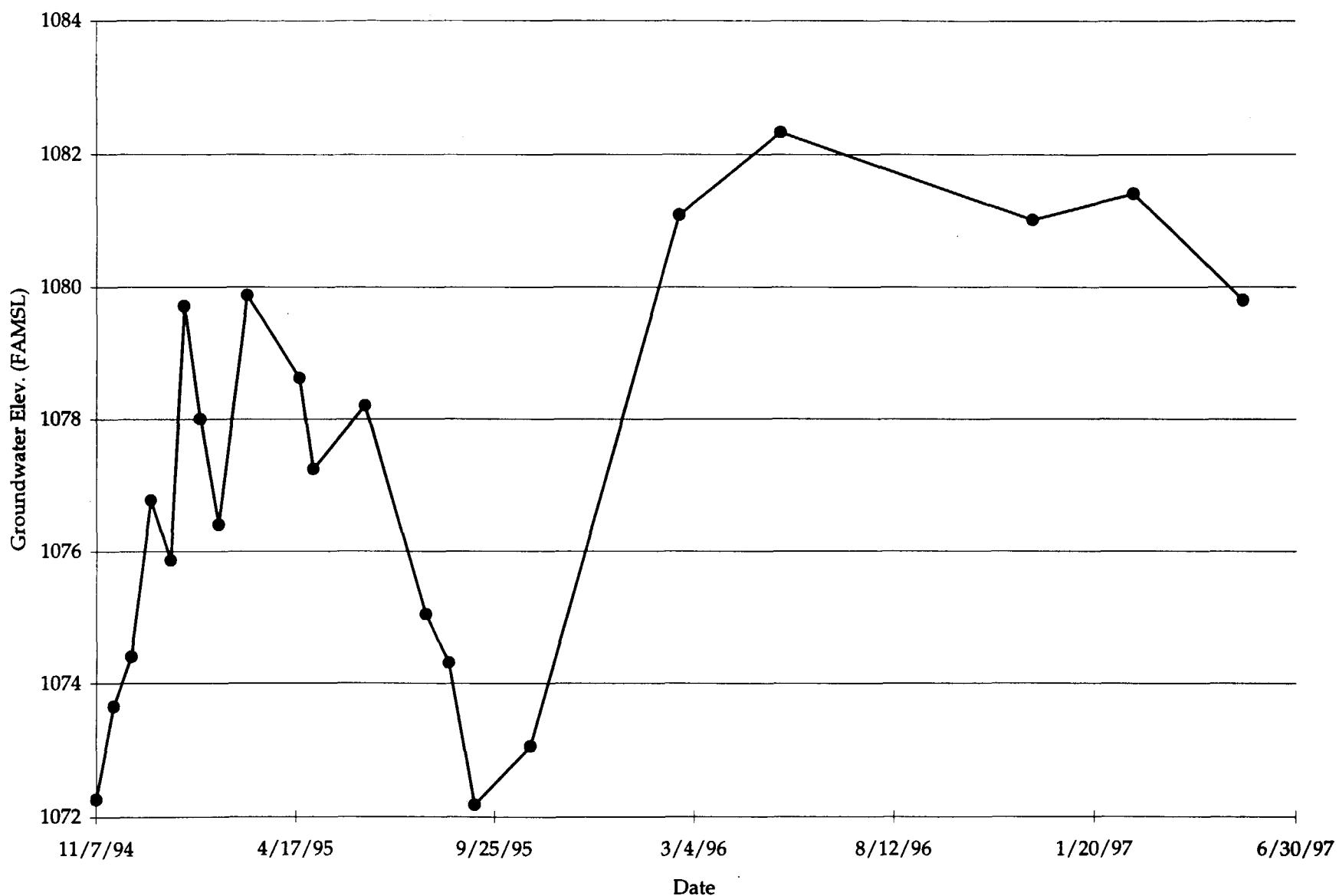
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SUMMIT NATIONAL SUPERFUND SITE



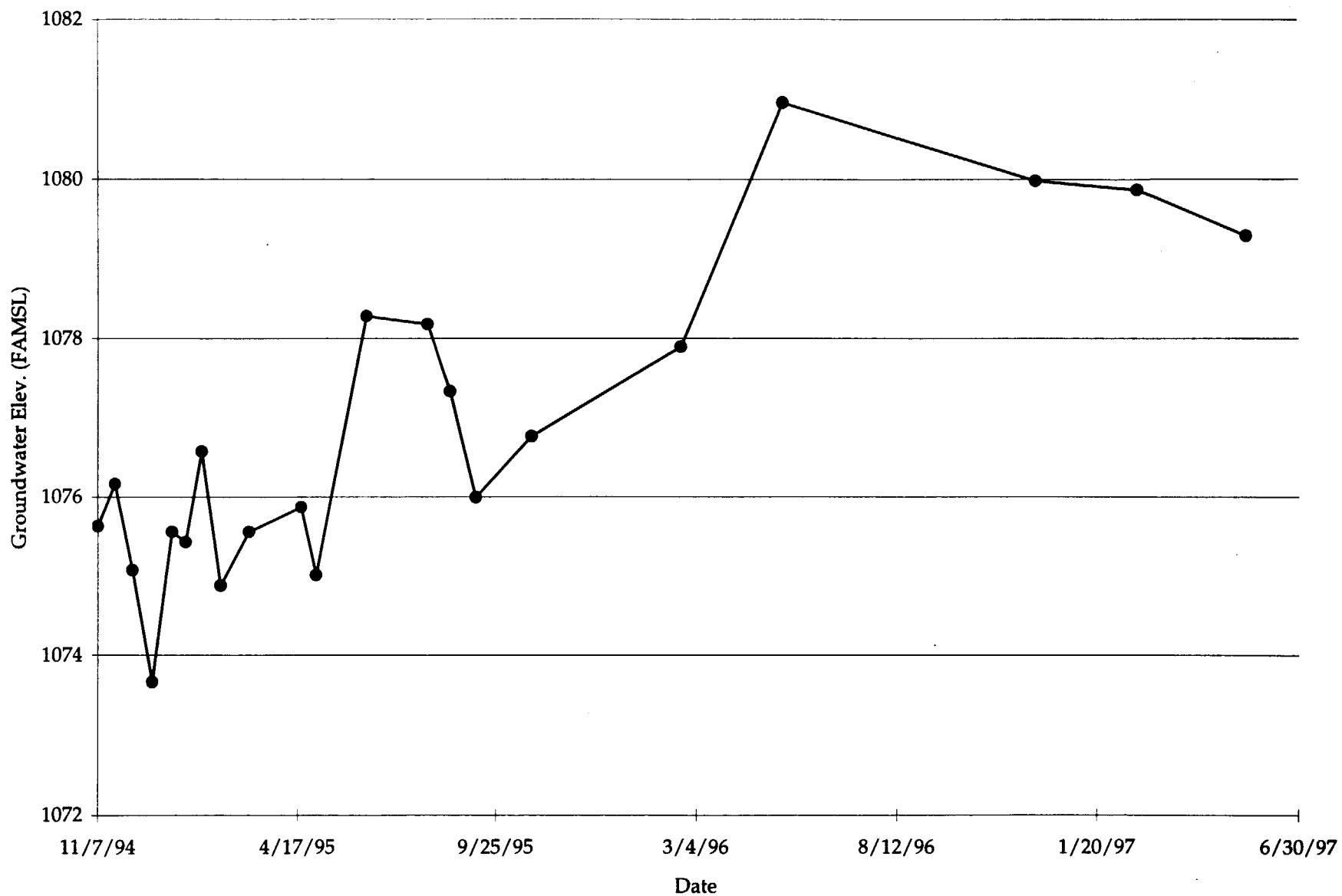
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UPPER INTERMEDIATE UNIT: PZ-206
SUMMIT NATIONAL SUPERFUND SITE



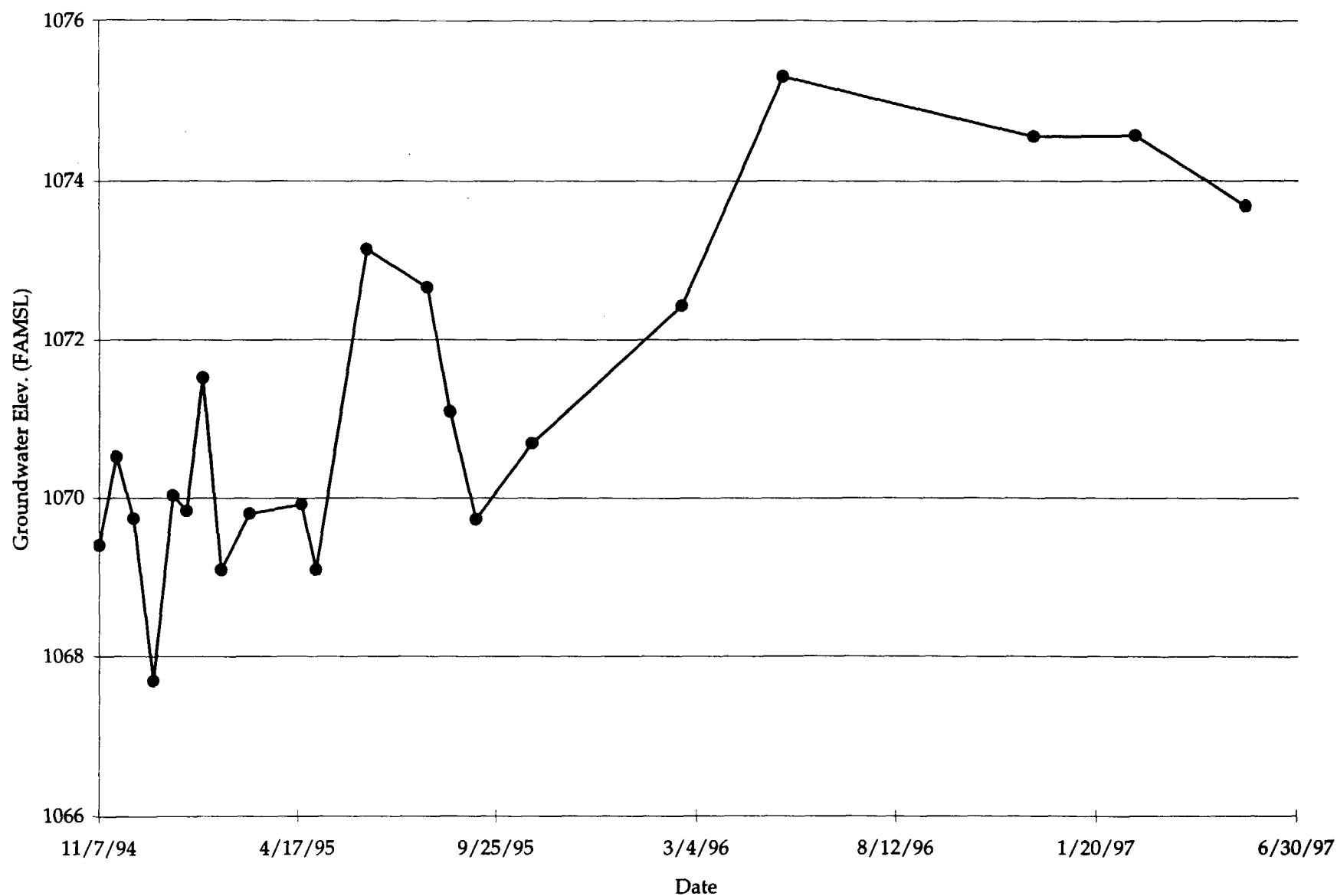
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UPPER INTERMEDIATE UNIT: PZ-207
SUMMIT NATIONAL SUPERFUND SITE



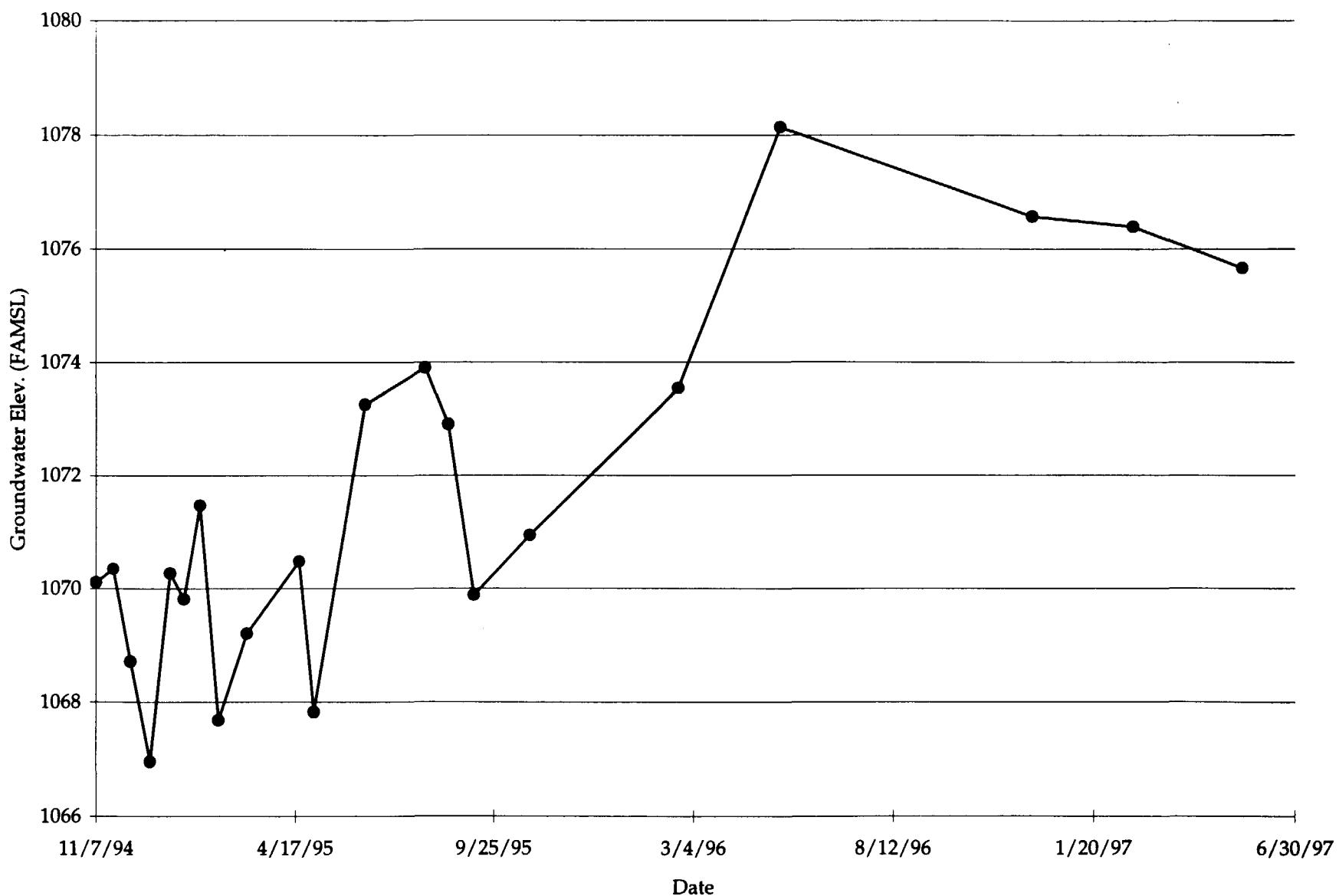
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-301
SUMMIT NATIONAL SUPERFUND SITE



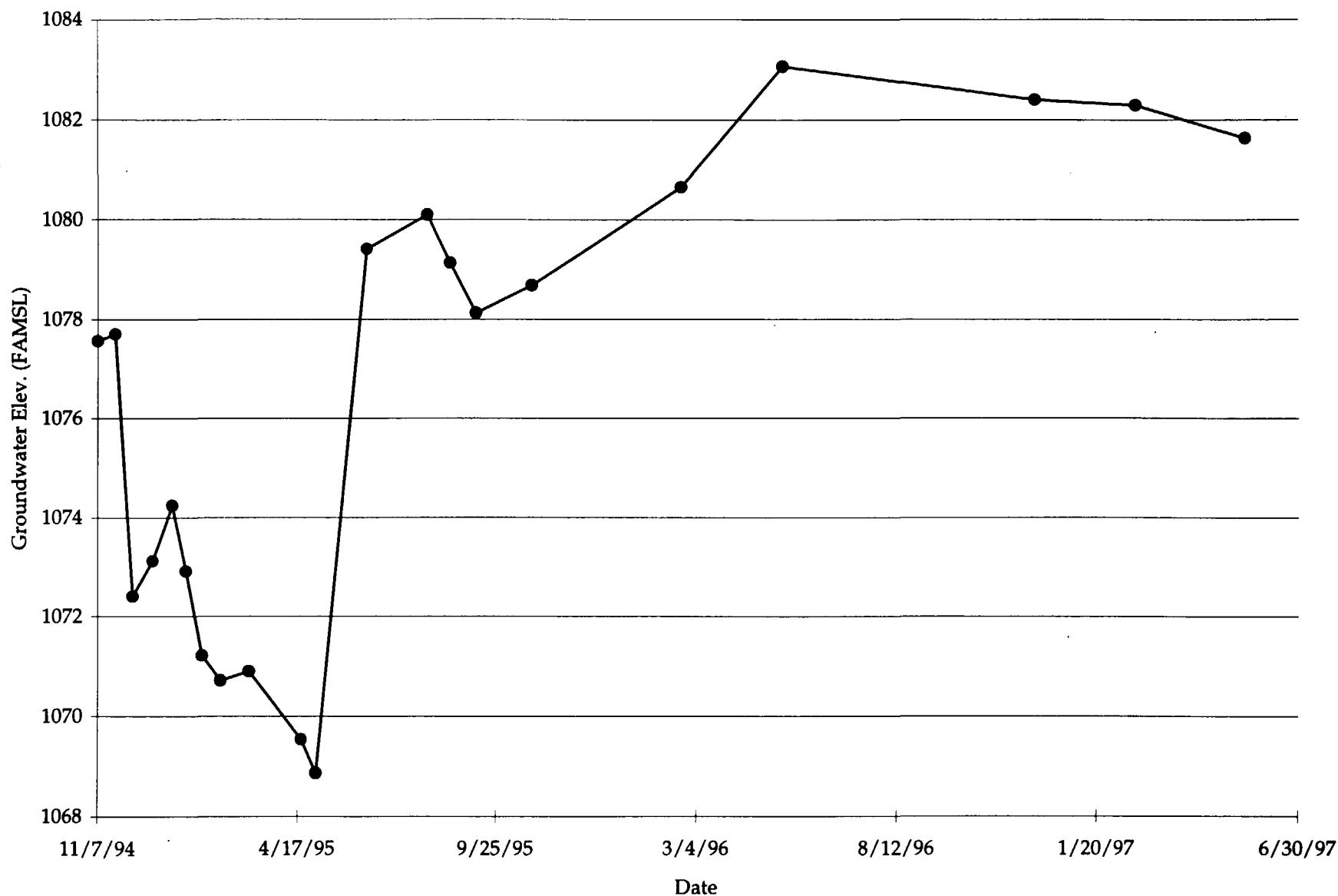
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-302
SUMMIT NATIONAL SUPERFUND SITE



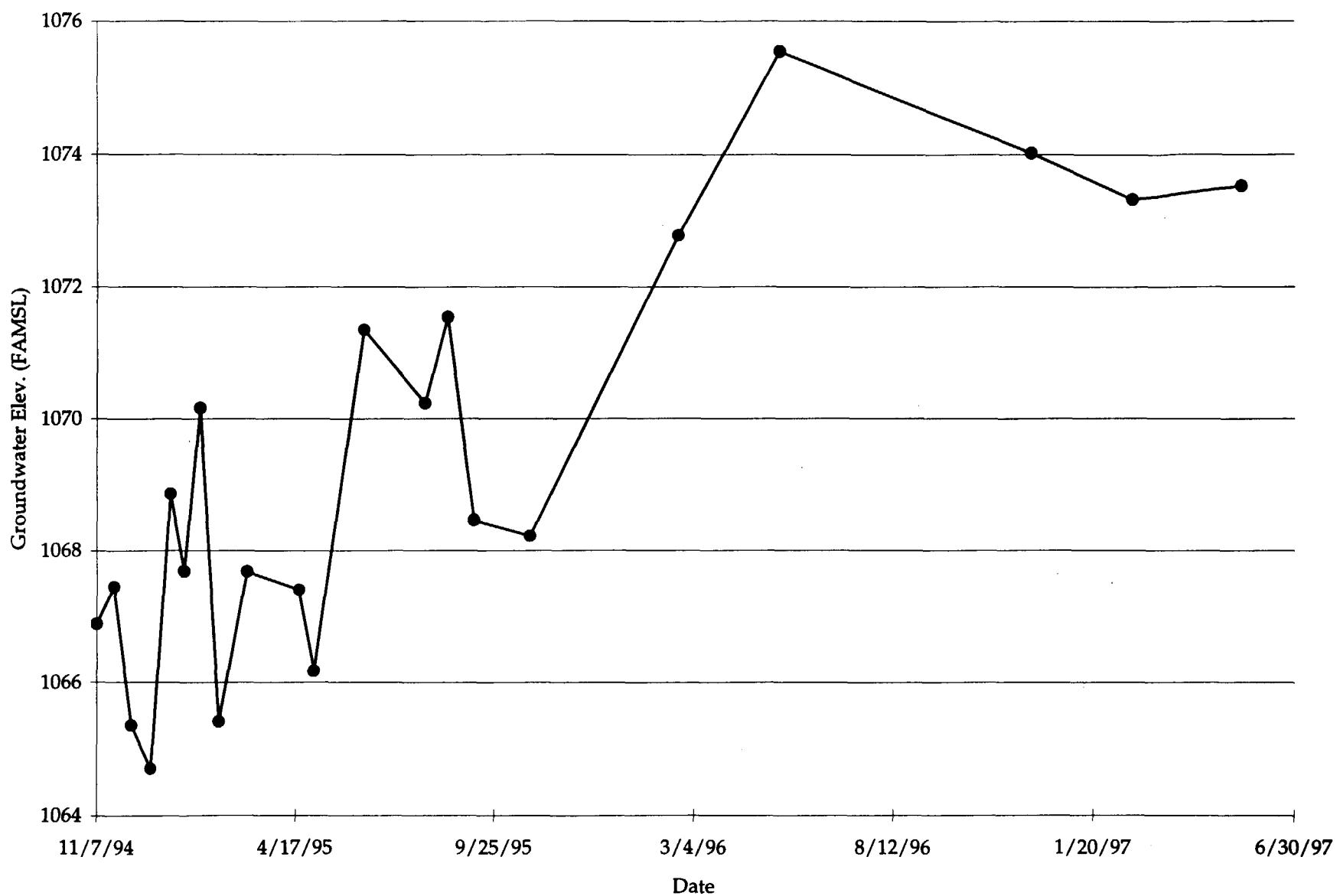
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-303
SUMMIT NATIONAL SUPERFUND SITE



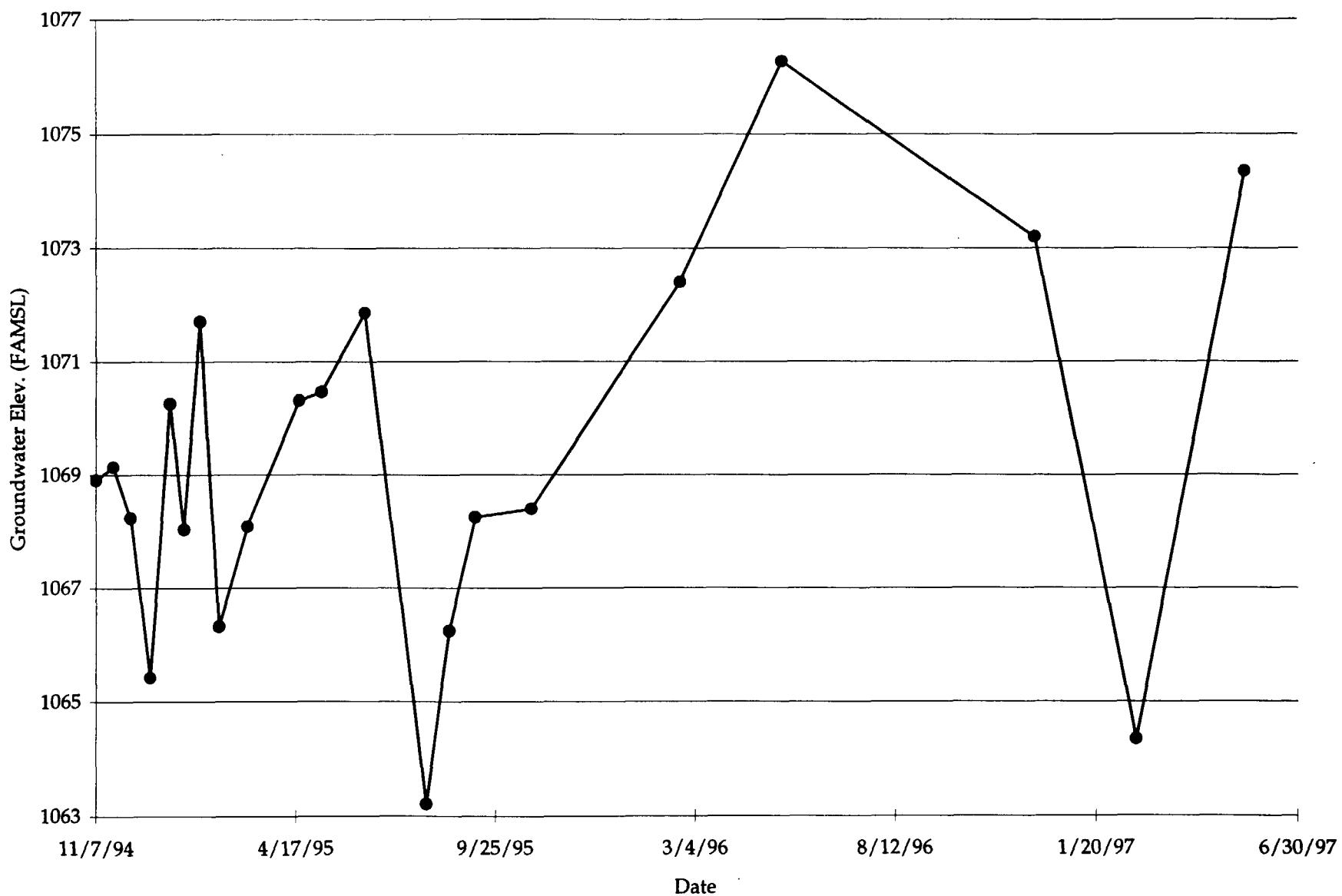
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-304
SUMMIT NATIONAL SUPERFUND SITE



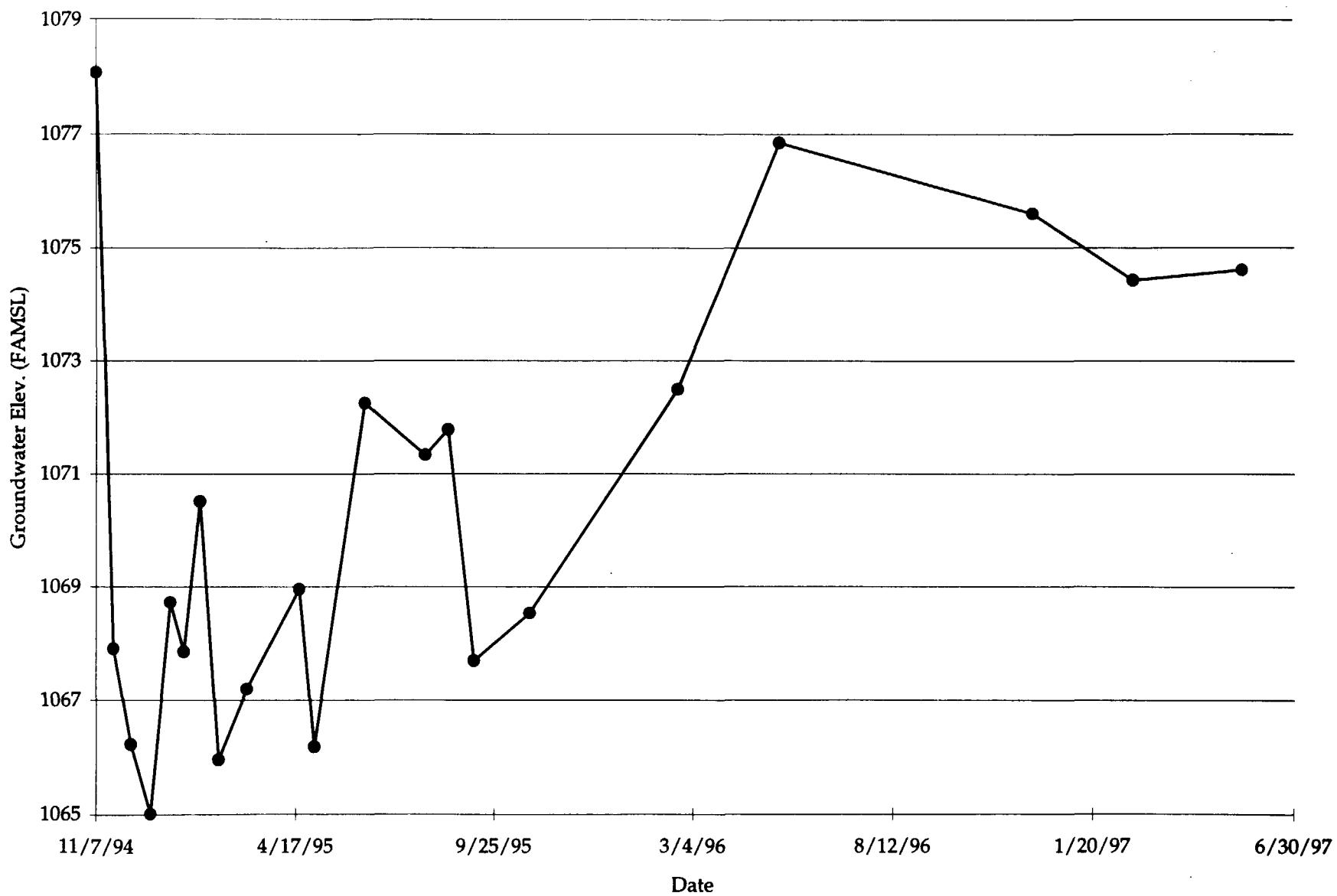
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-305
SUMMIT NATIONAL SUPERFUND SITE



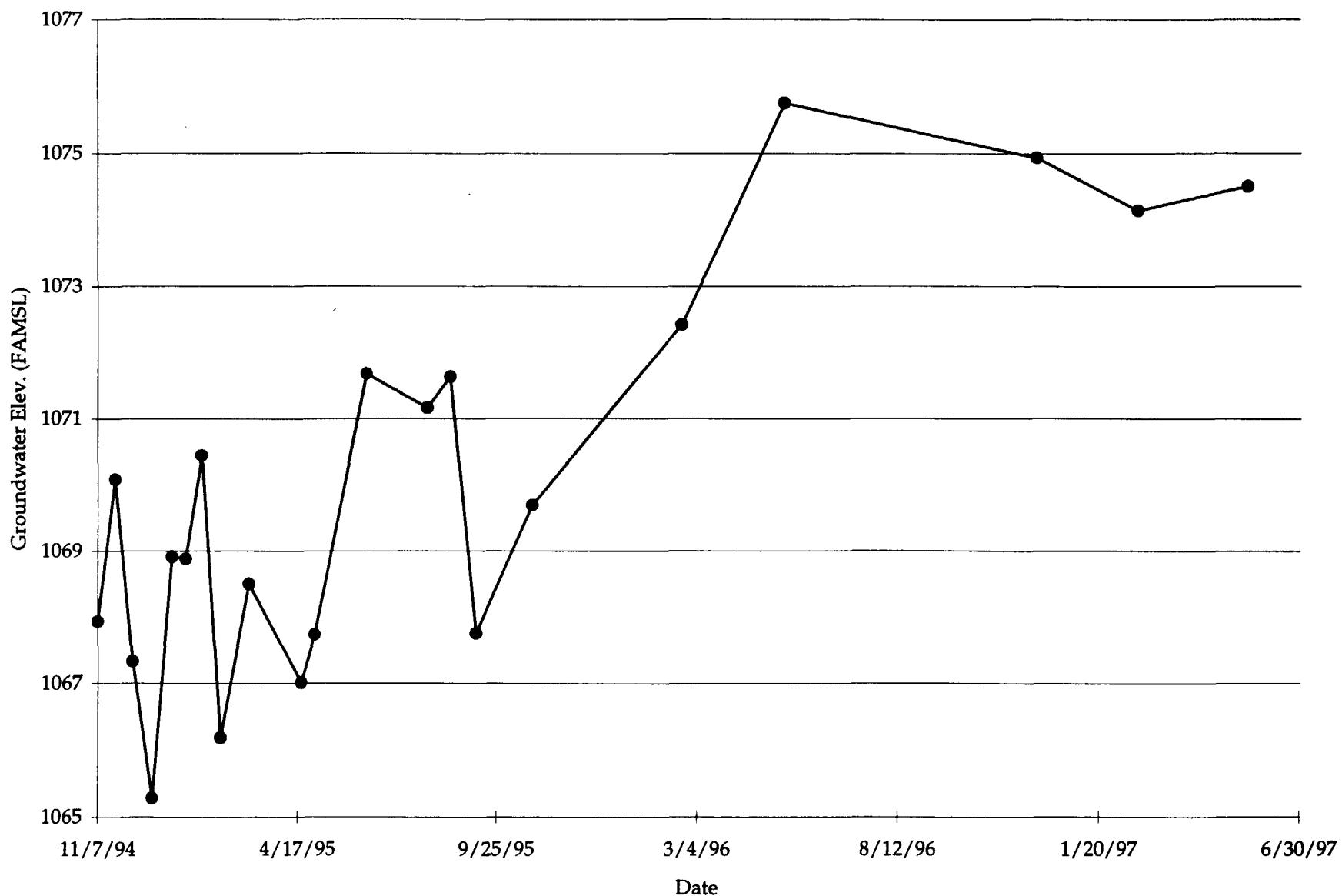
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-306
SUMMIT NATIONAL SUPERFUND SITE



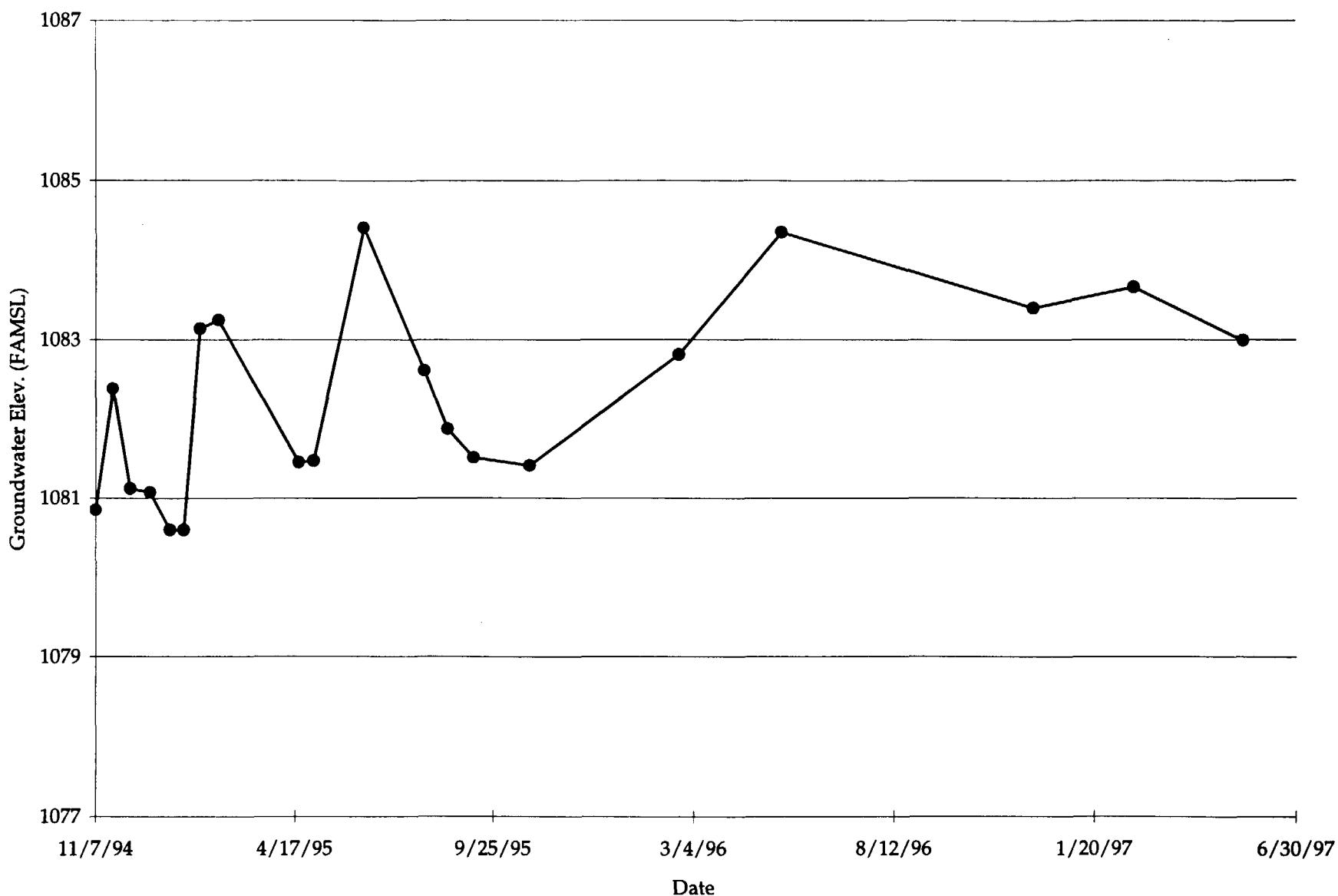
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-307
SUMMIT NATIONAL SUPERFUND SITE



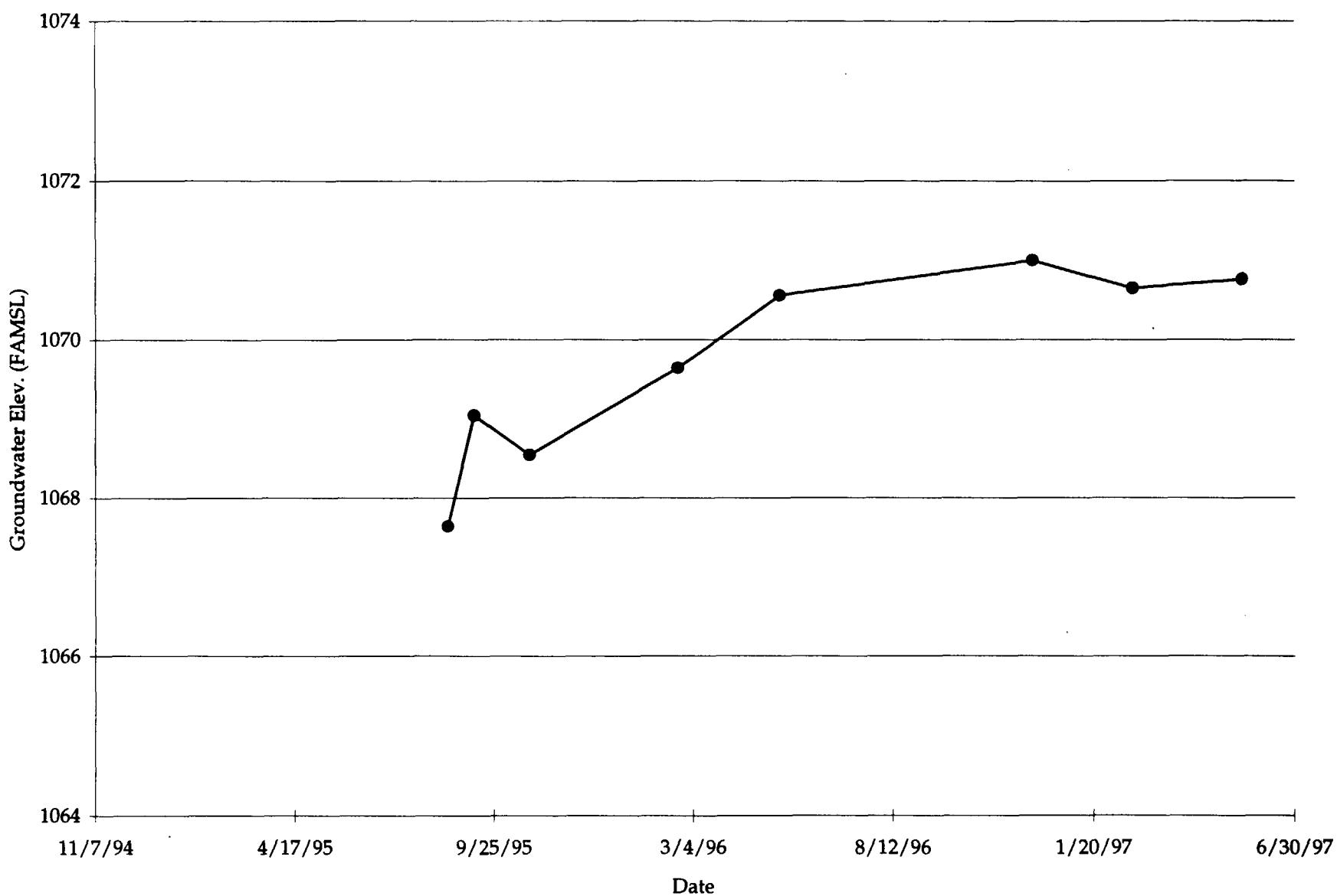
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-309
SUMMIT NATIONAL SUPERFUND SITE



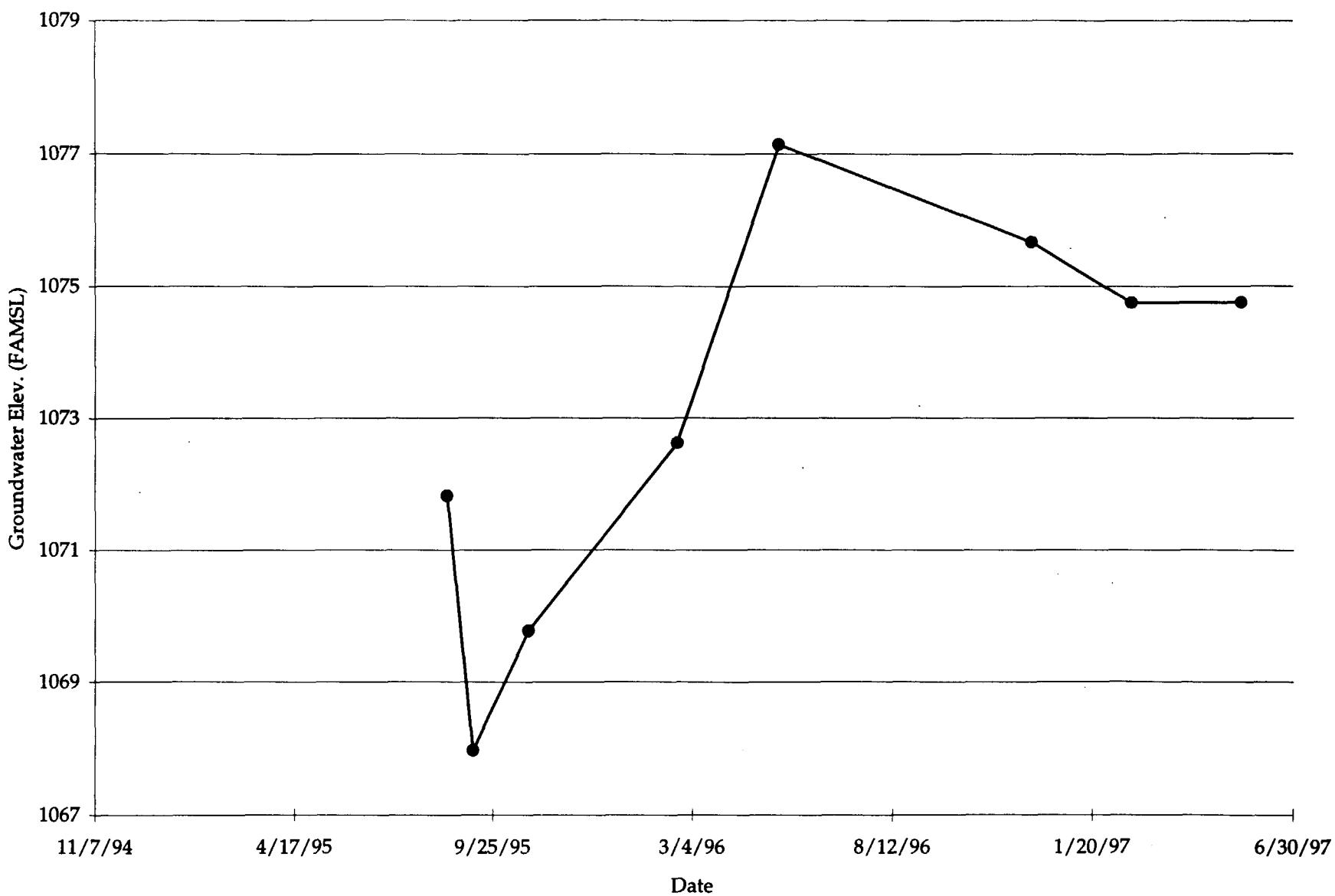
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-319
SUMMIT NATIONAL SUPERFUND SITE



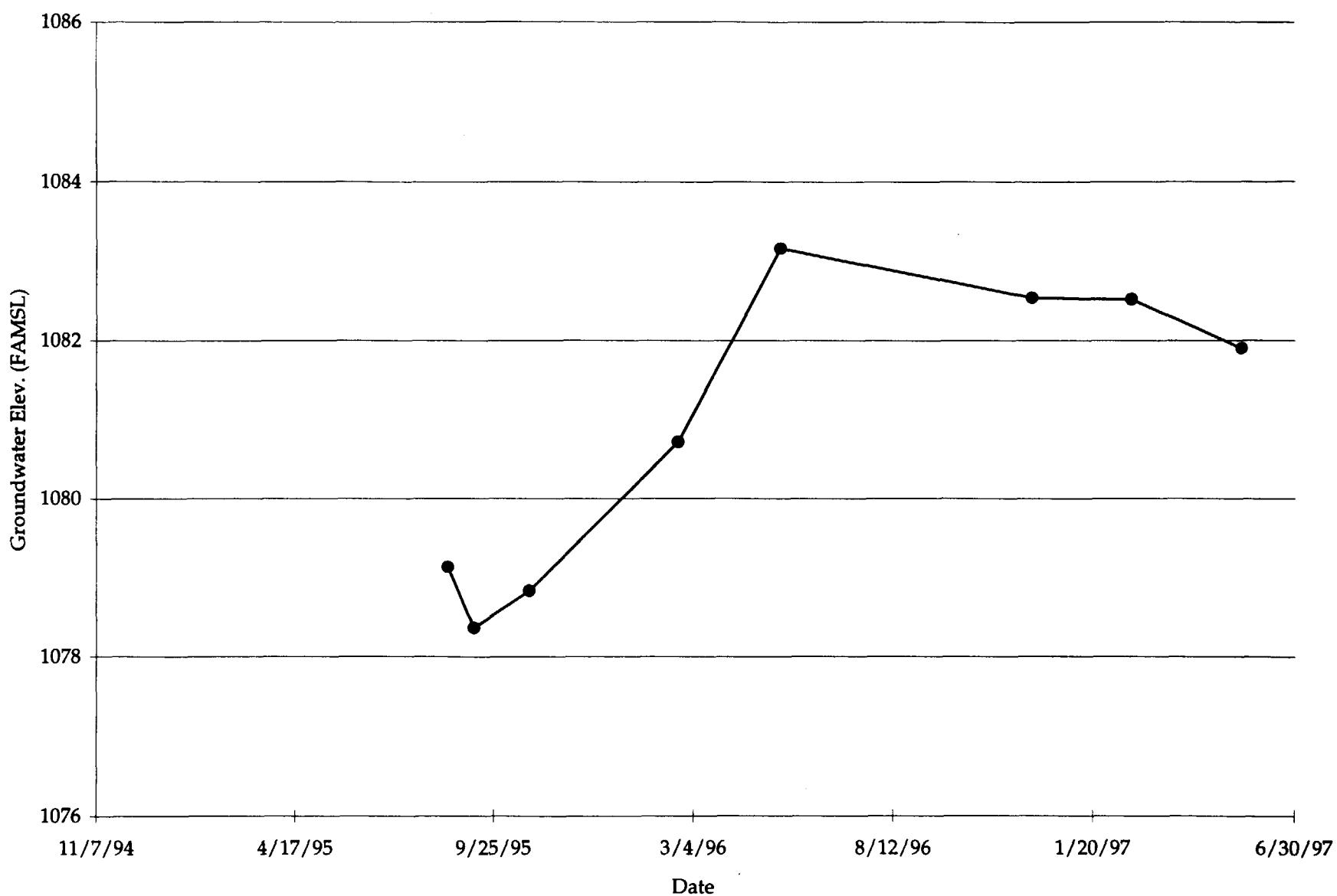
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-320
SUMMIT NATIONAL SUPERFUND SITE



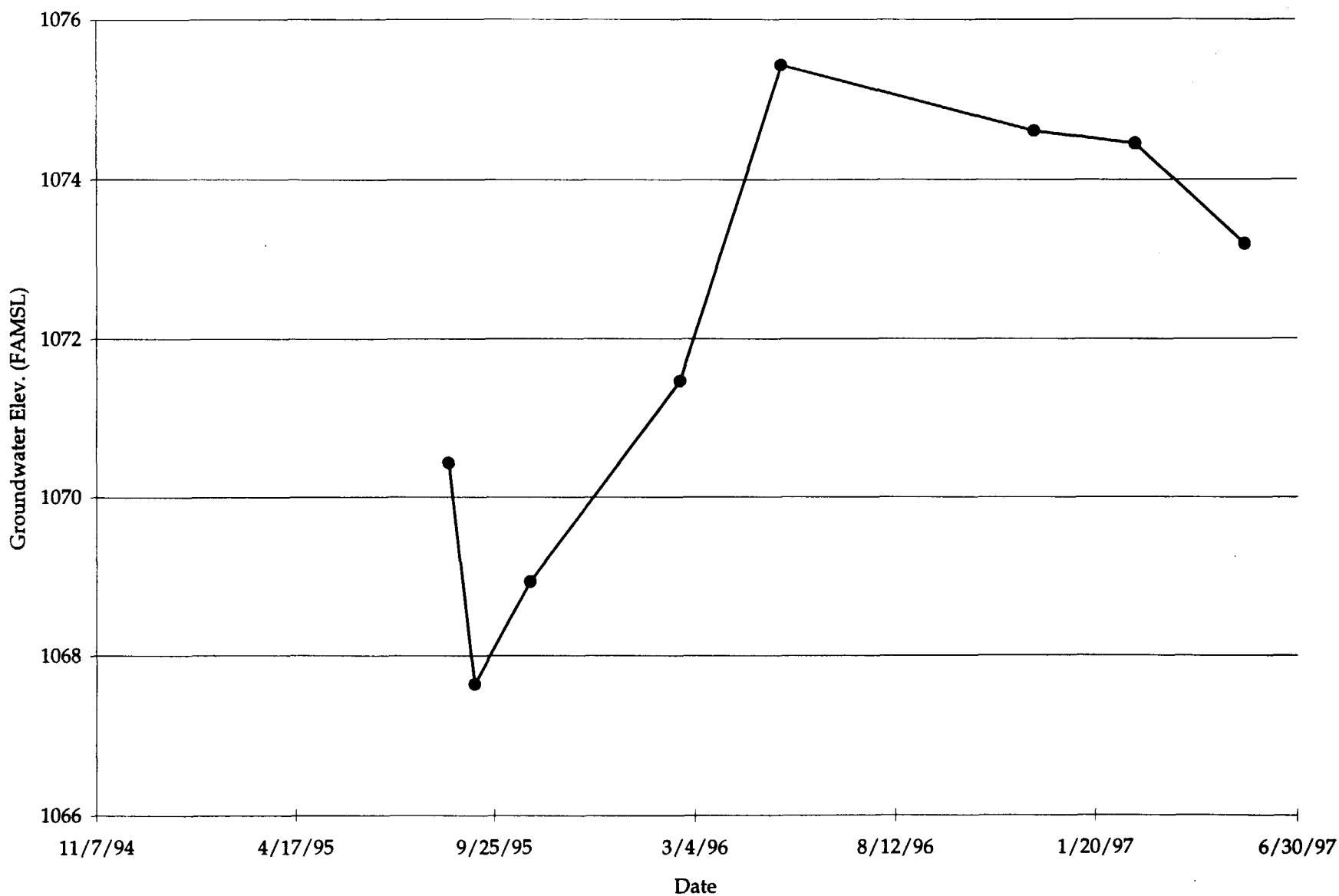
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-321
SUMMIT NATIONAL SUPERFUND SITE



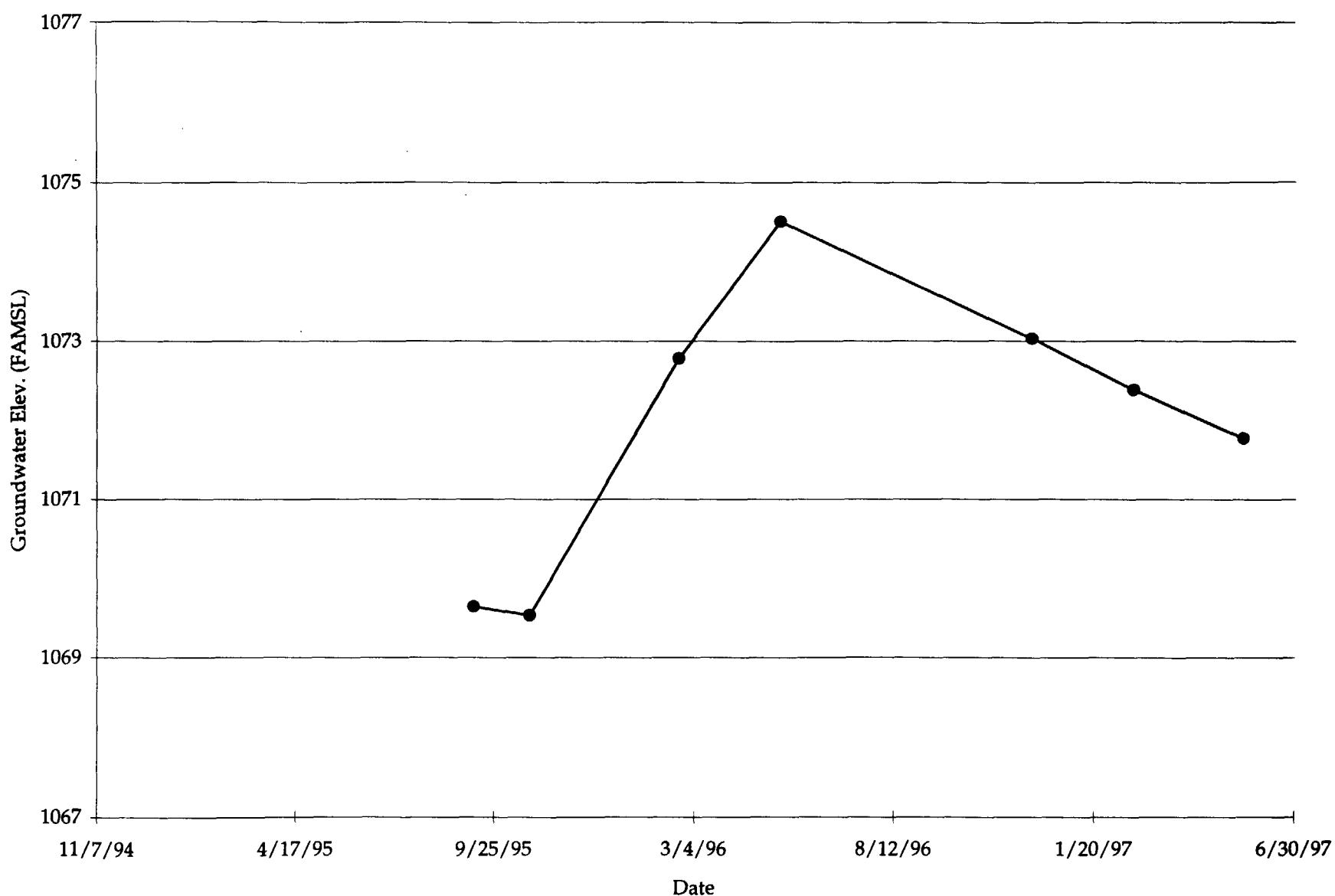
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-322
SUMMIT NATIONAL SUPERFUND SITE



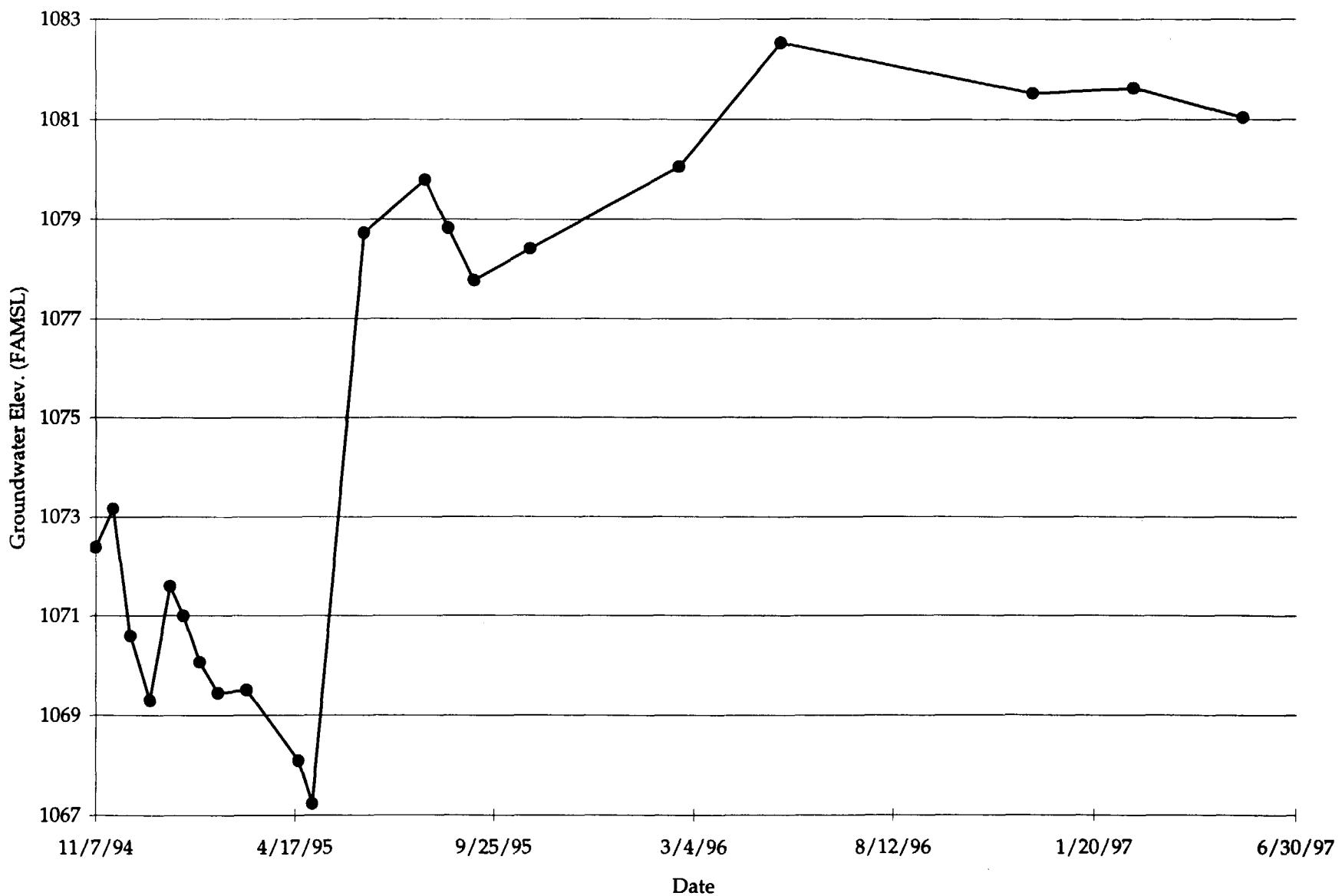
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-323
SUMMIT NATIONAL SUPERFUND SITE



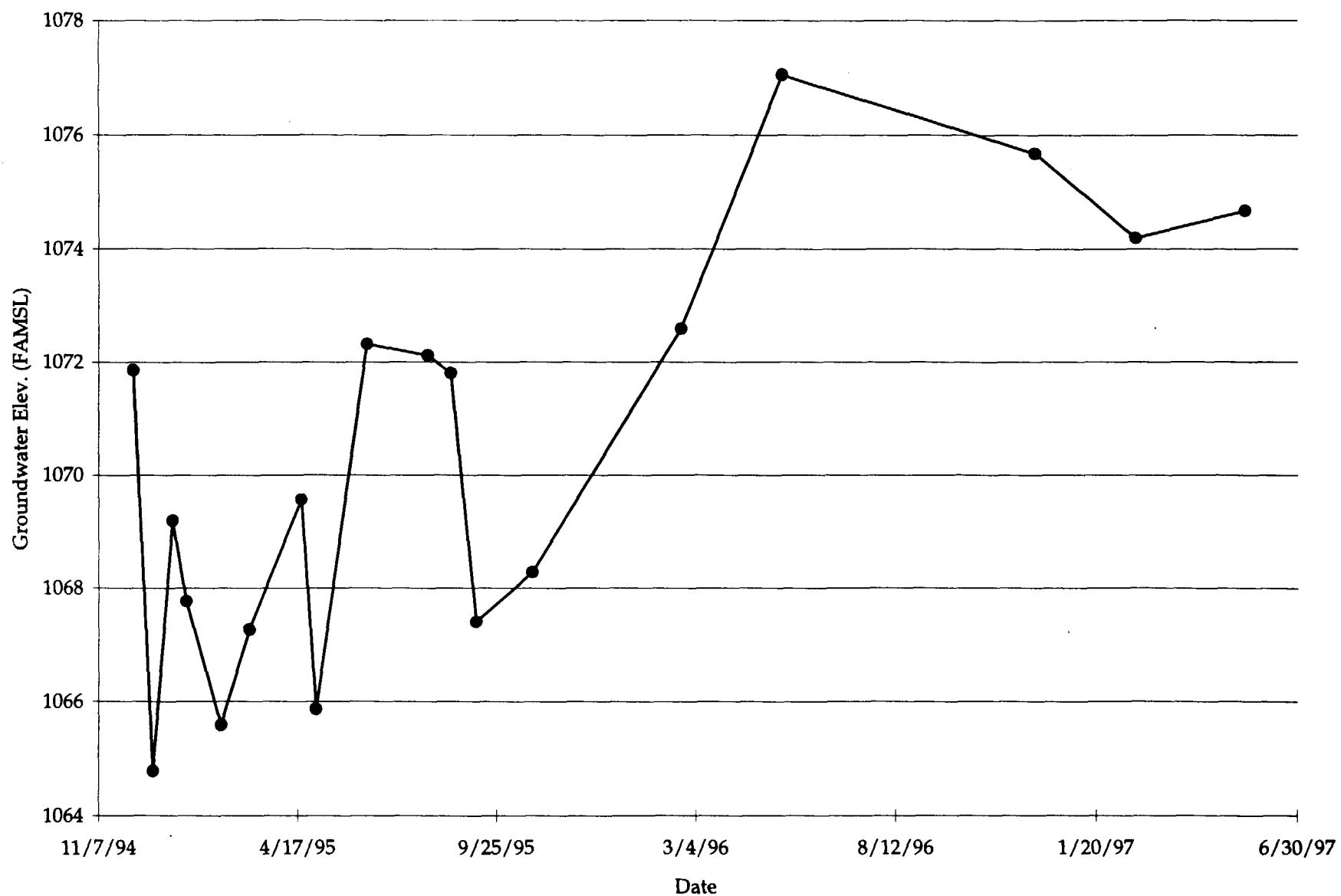
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-324
SUMMIT NATIONAL SUPERFUND SITE



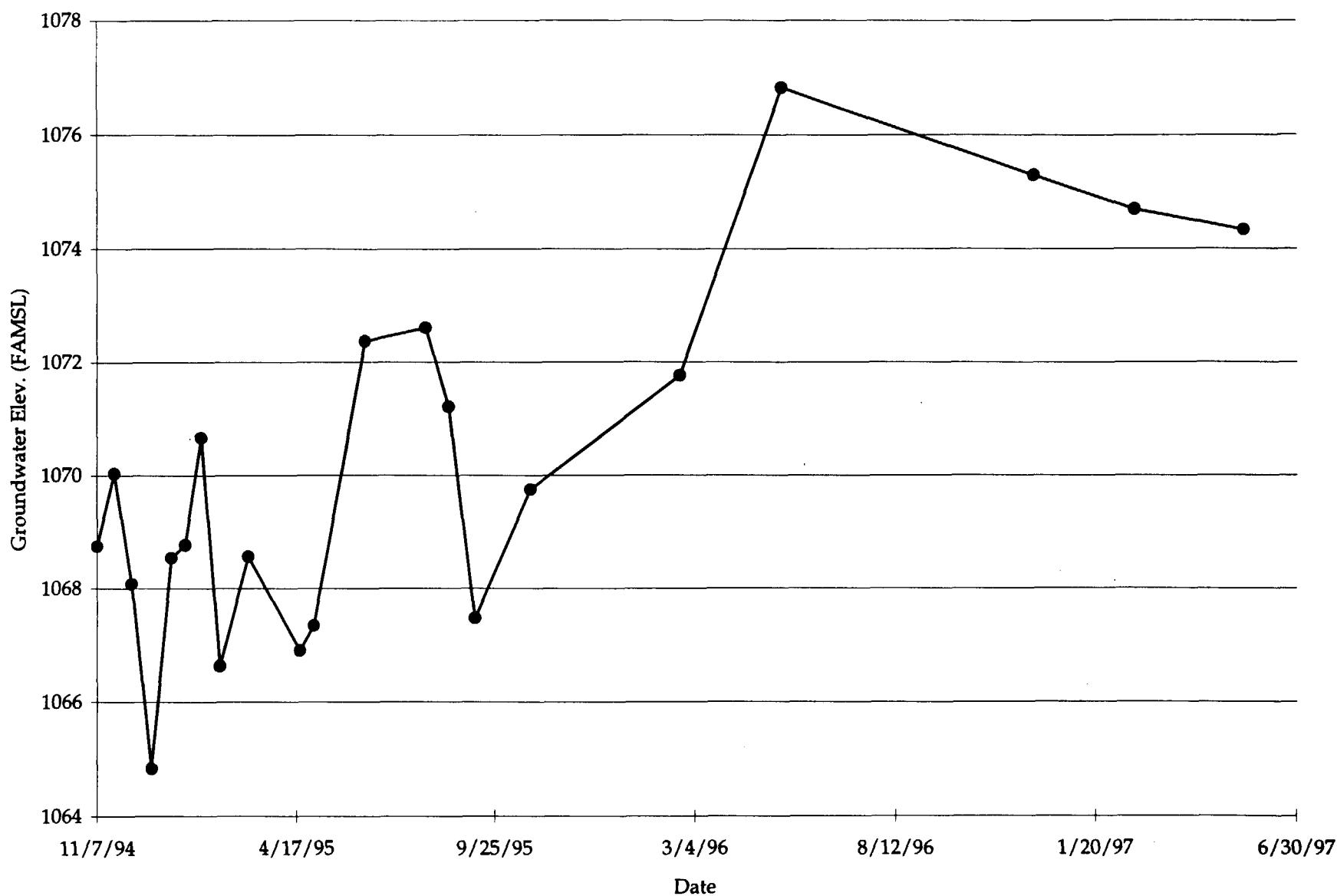
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-301
SUMMIT NATIONAL SUPERFUND SITE



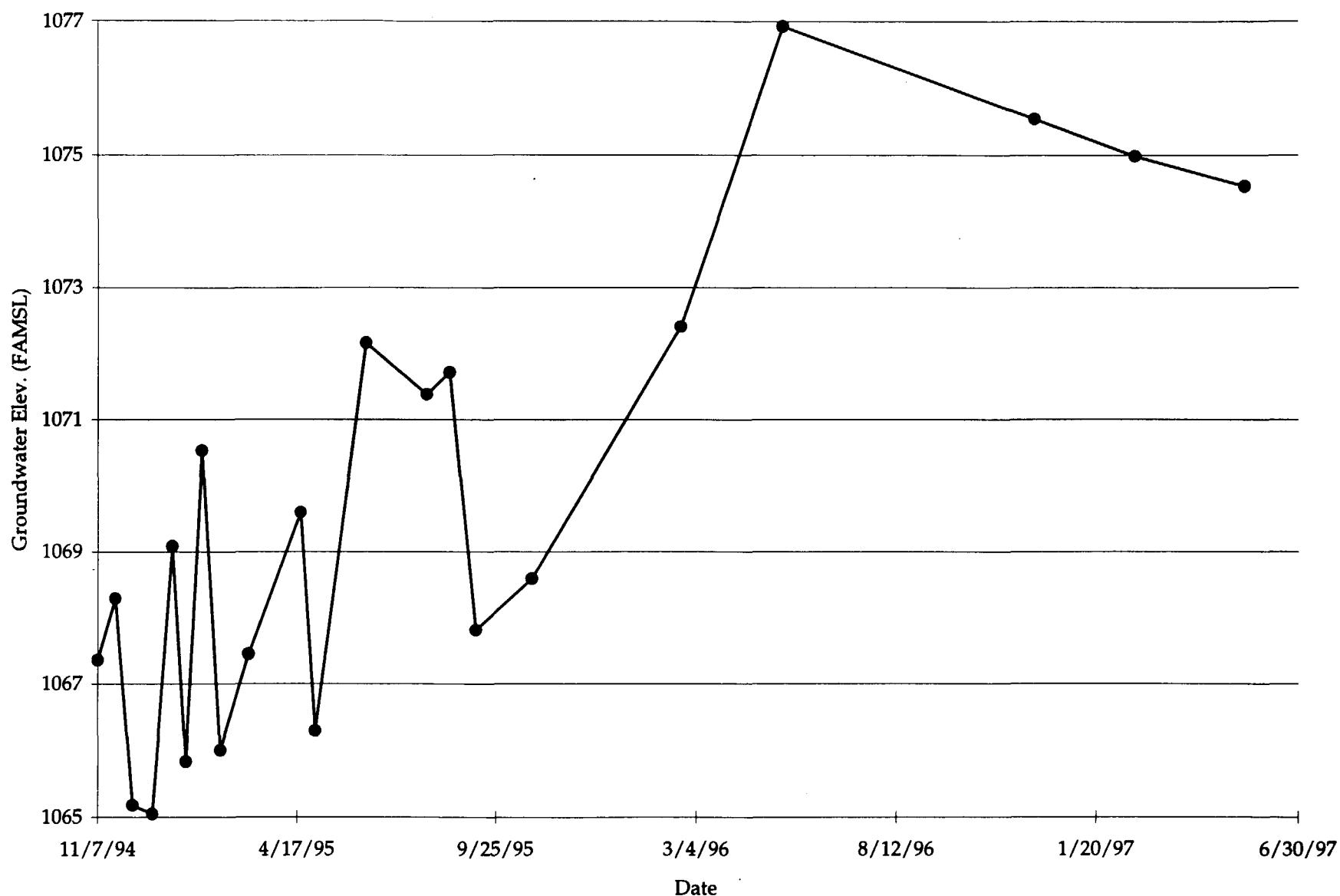
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-302
SUMMIT NATIONAL SUPERFUND SITE



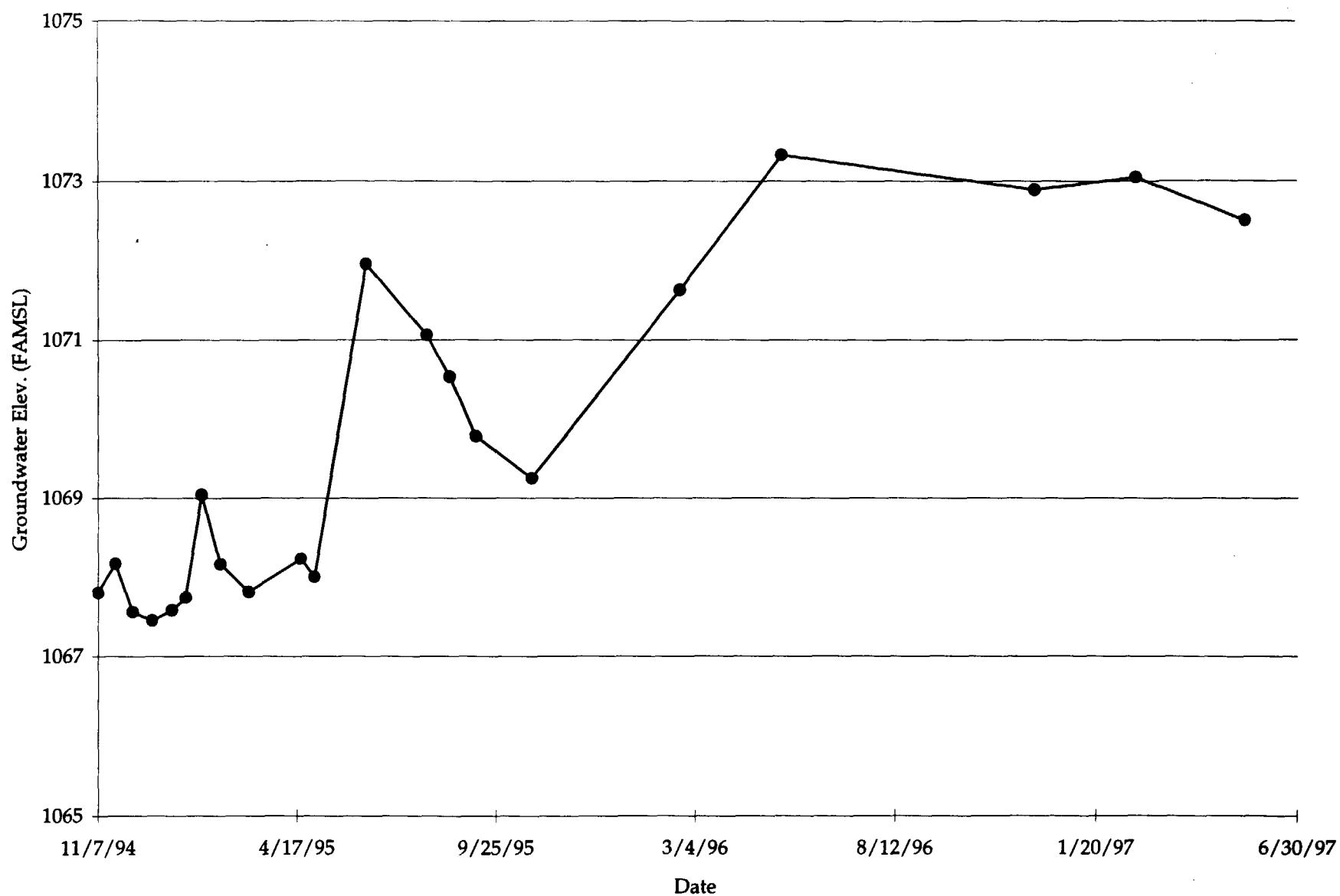
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-303
SUMMIT NATIONAL SUPERFUND SITE



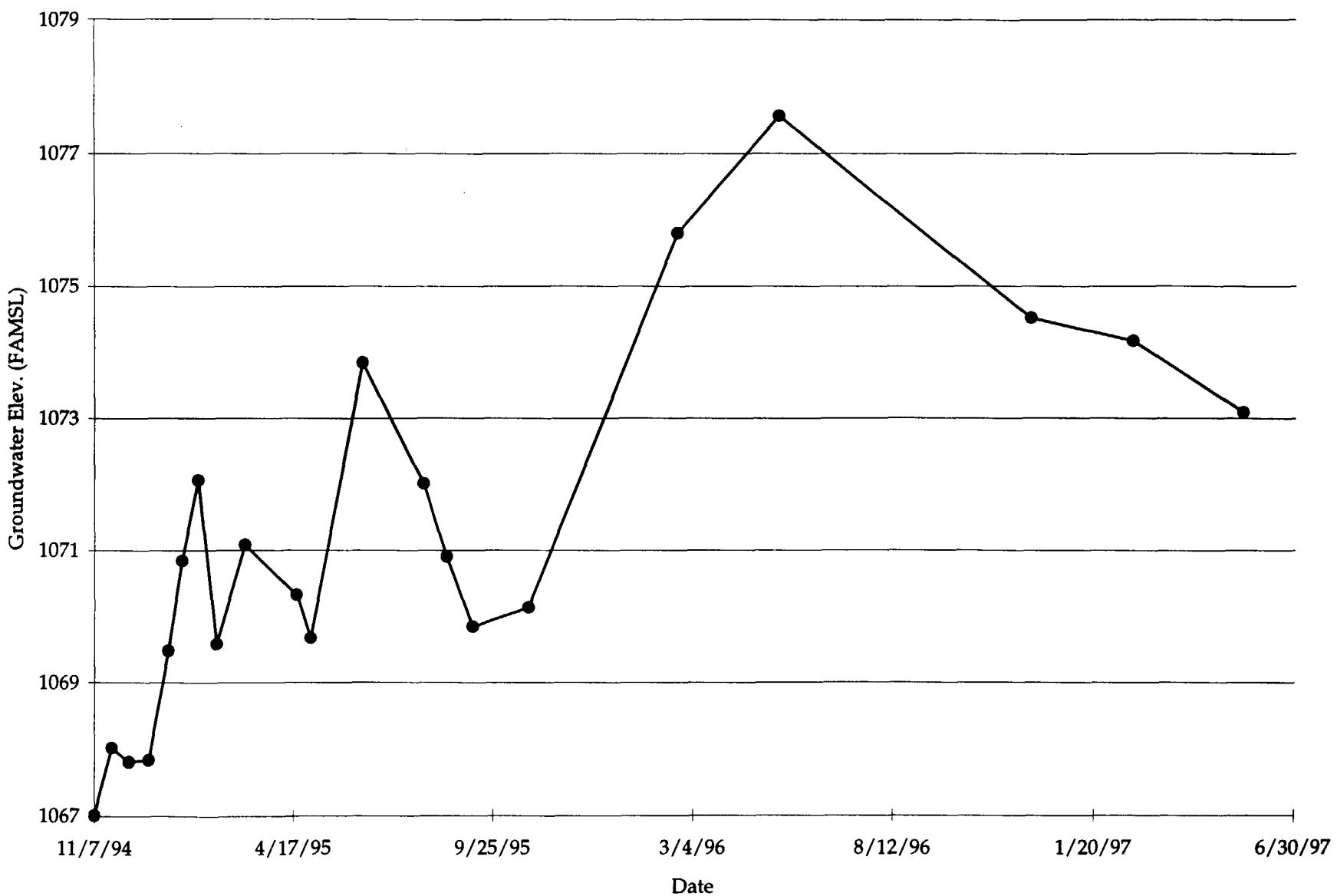
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-305
SUMMIT NATIONAL SUPERFUND SITE



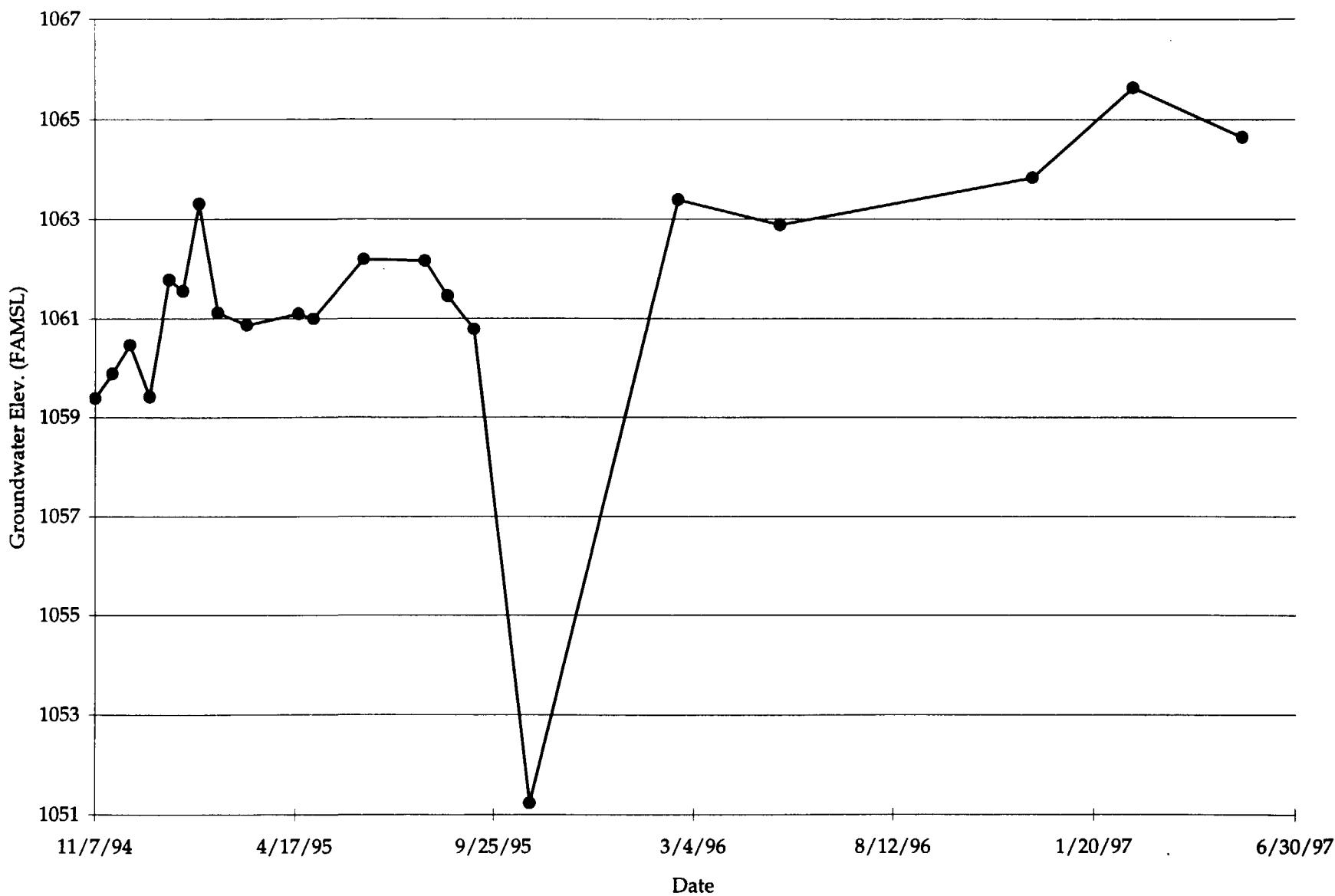
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-306
SUMMIT NATIONAL SUPERFUND SITE



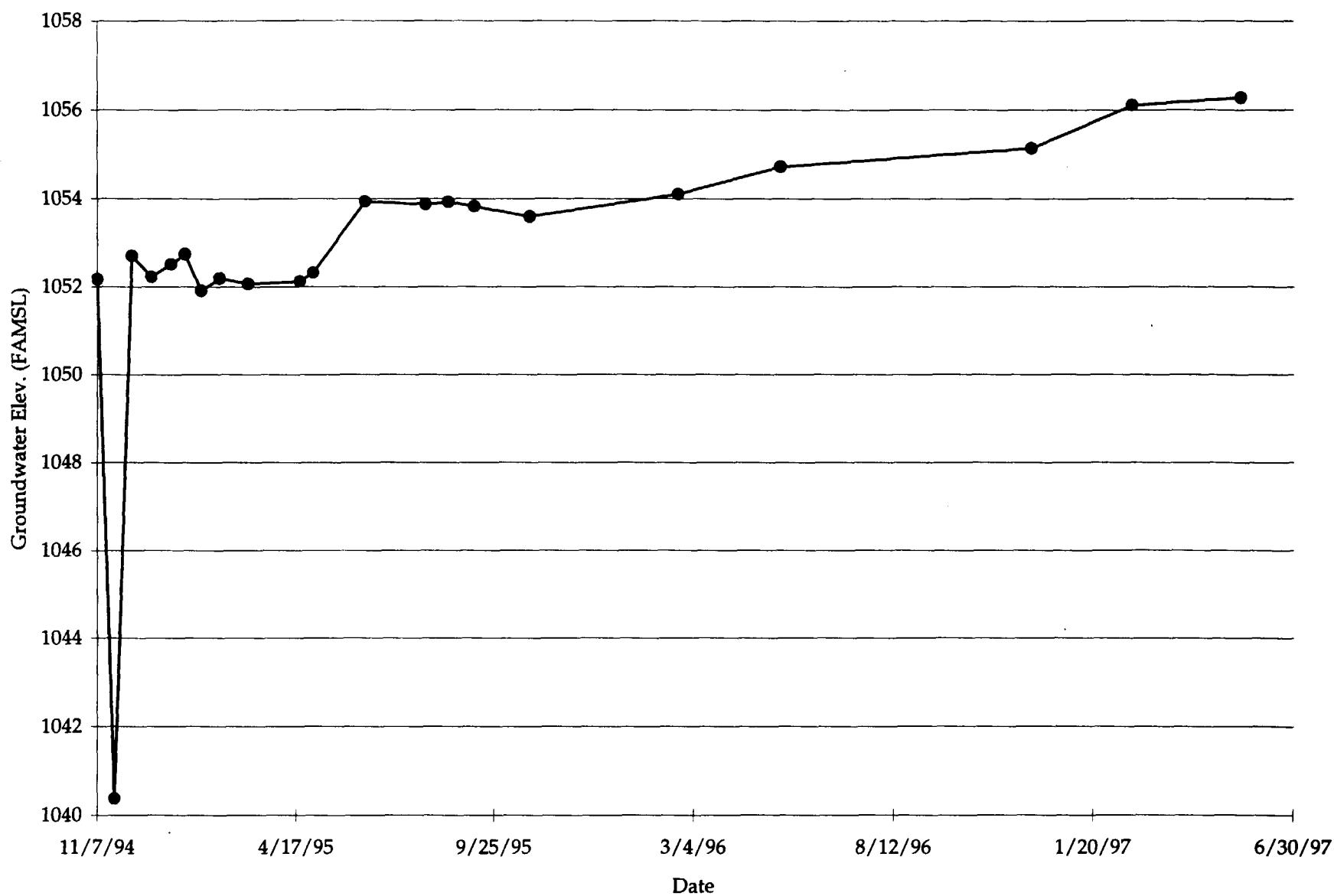
GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-307
SUMMIT NATIONAL SUPERFUND SITE



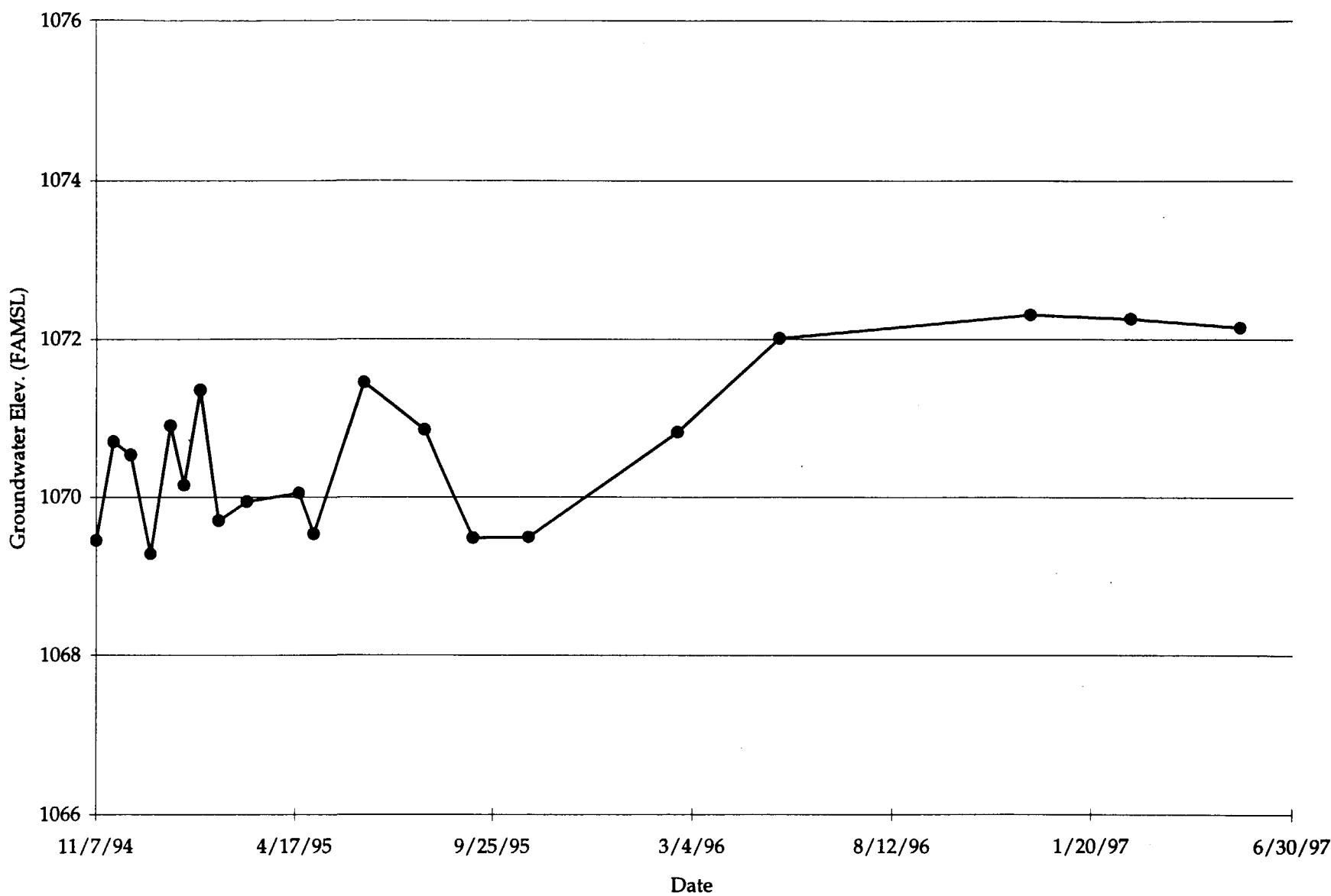
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-401
SUMMIT NATIONAL SUPERFUND SITE



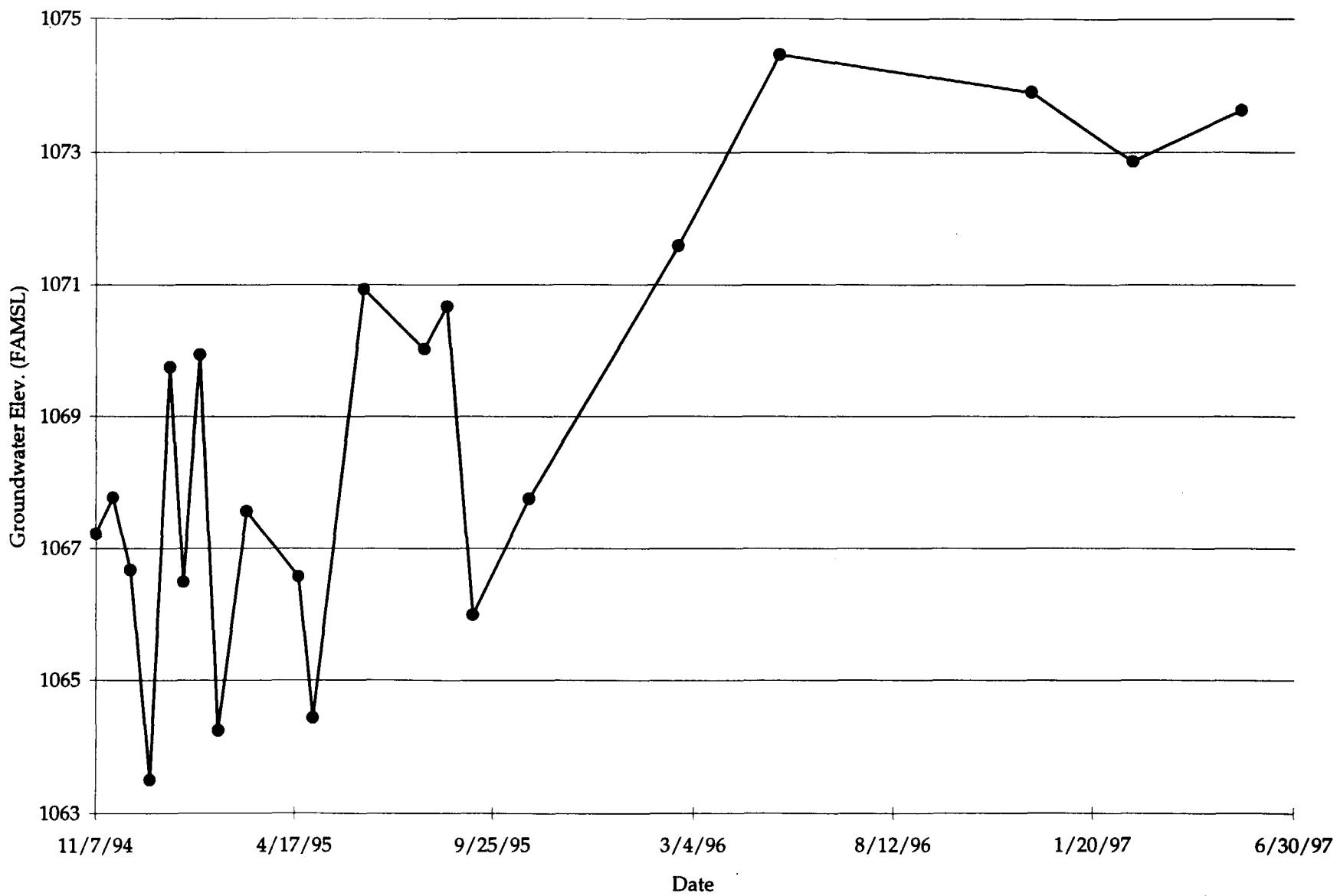
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-402
SUMMIT NATIONAL SUPERFUND SITE



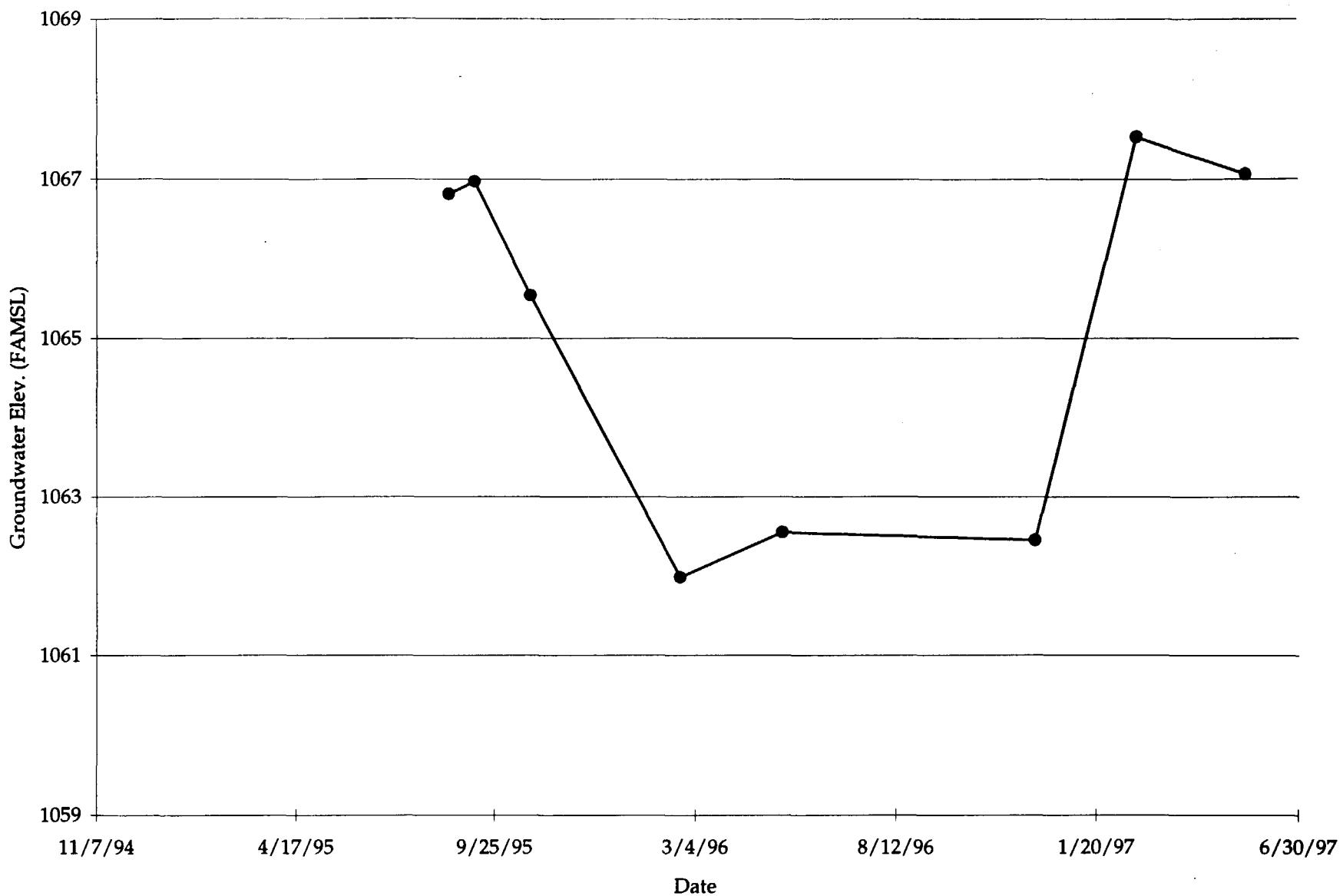
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-414
SUMMIT NATIONAL SUPERFUND SITE



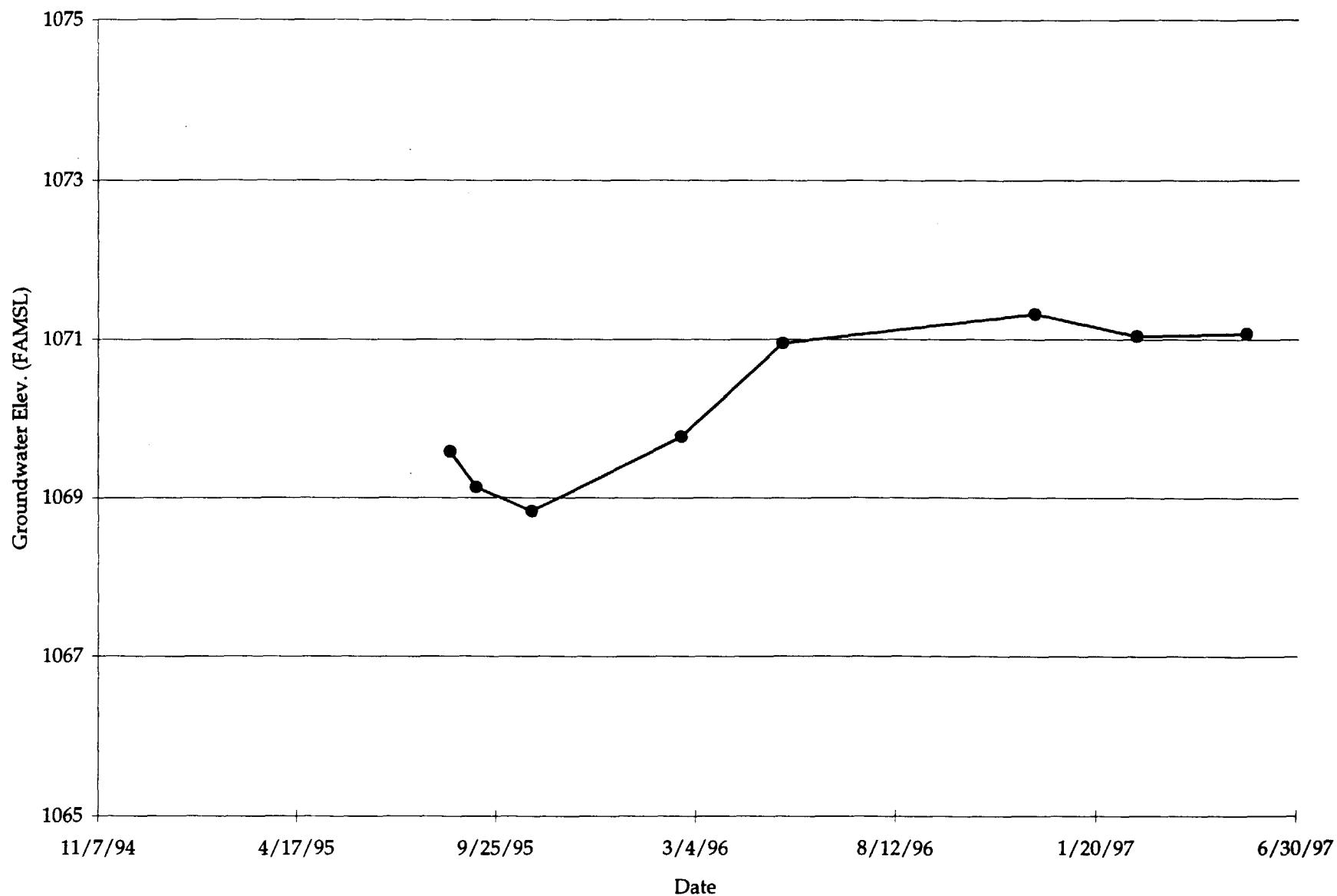
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-415
SUMMIT NATIONAL SUPERFUND SITE



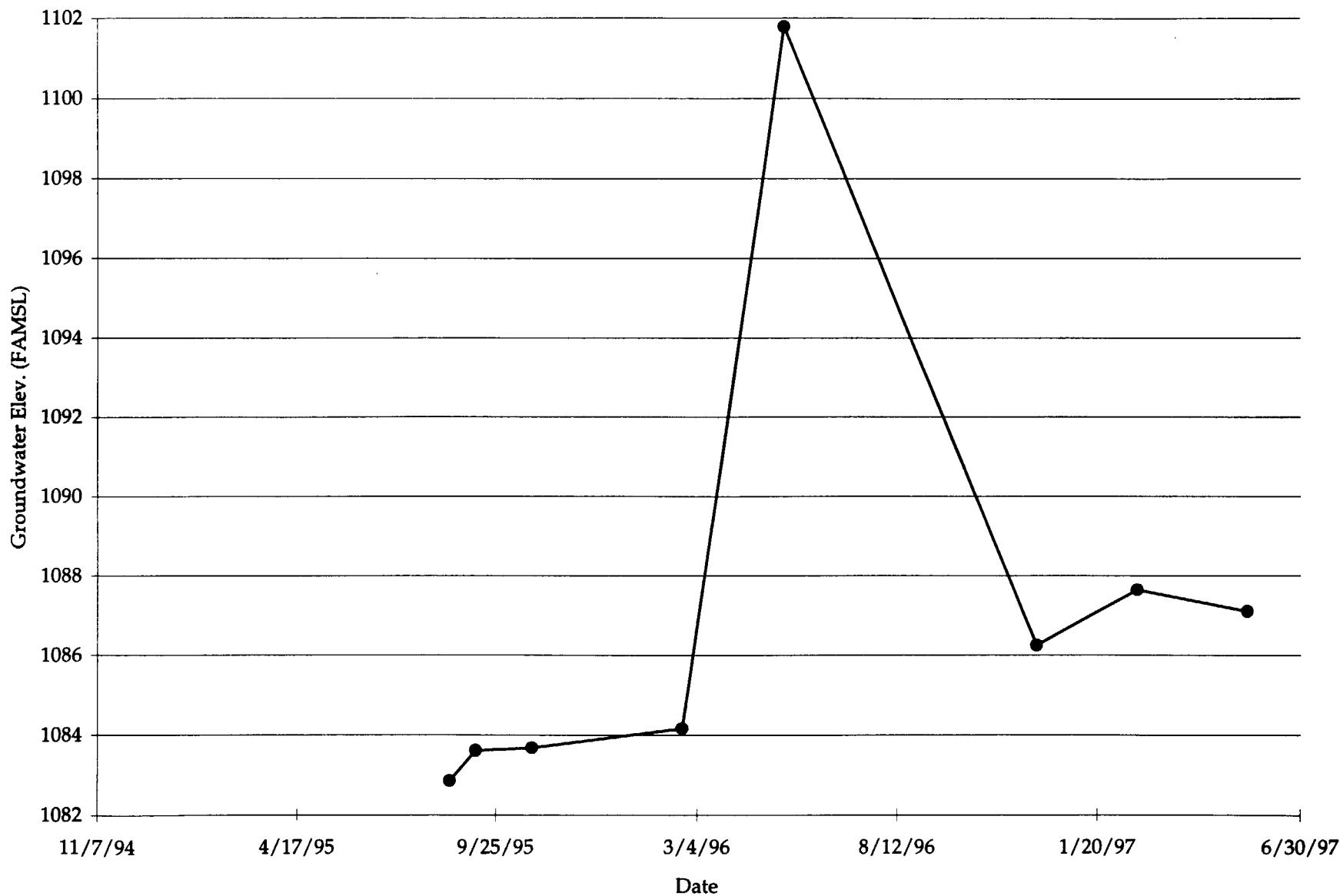
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-420
SUMMIT NATIONAL SUPERFUND SITE



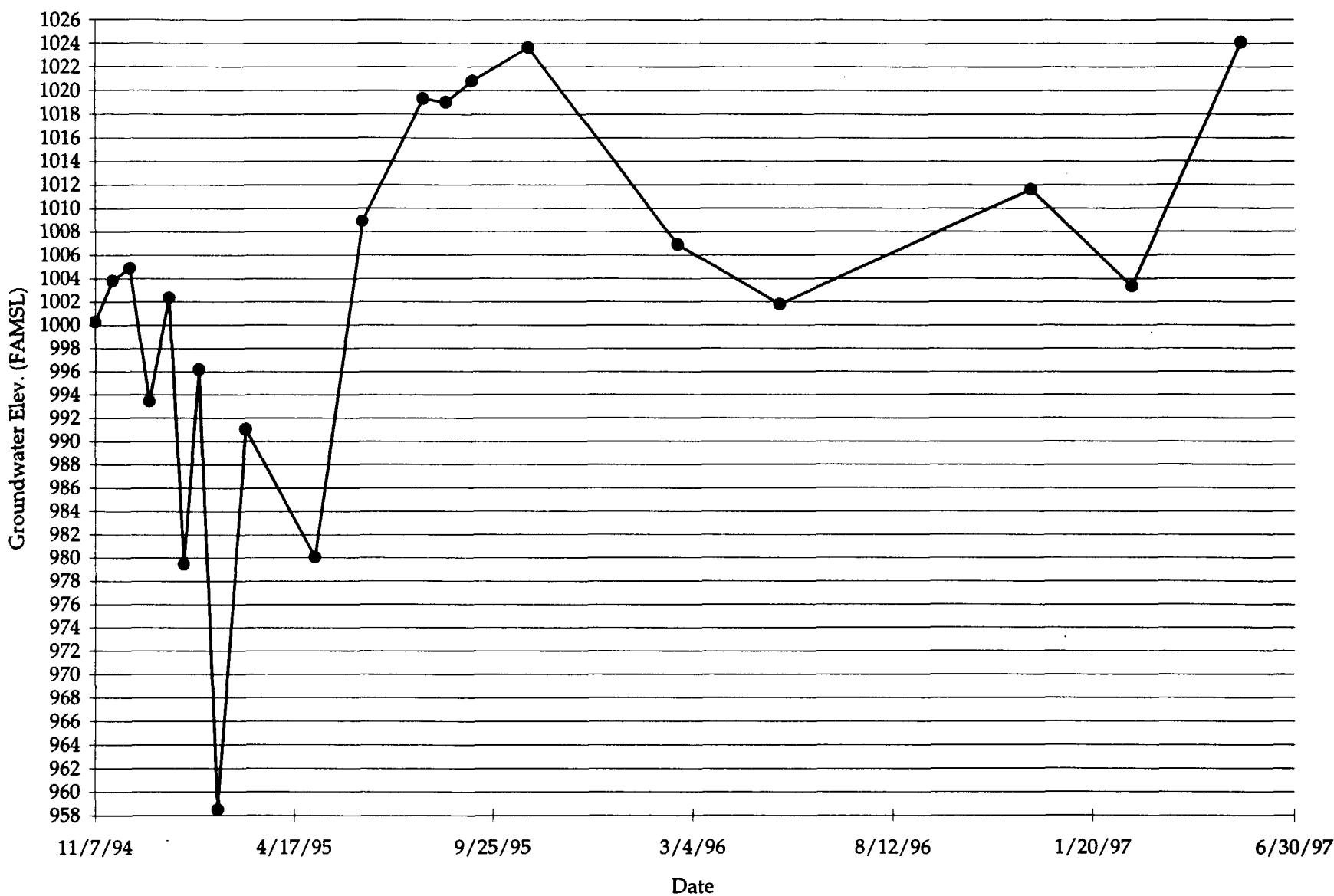
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-421
SUMMIT NATIONAL SUPERFUND SITE



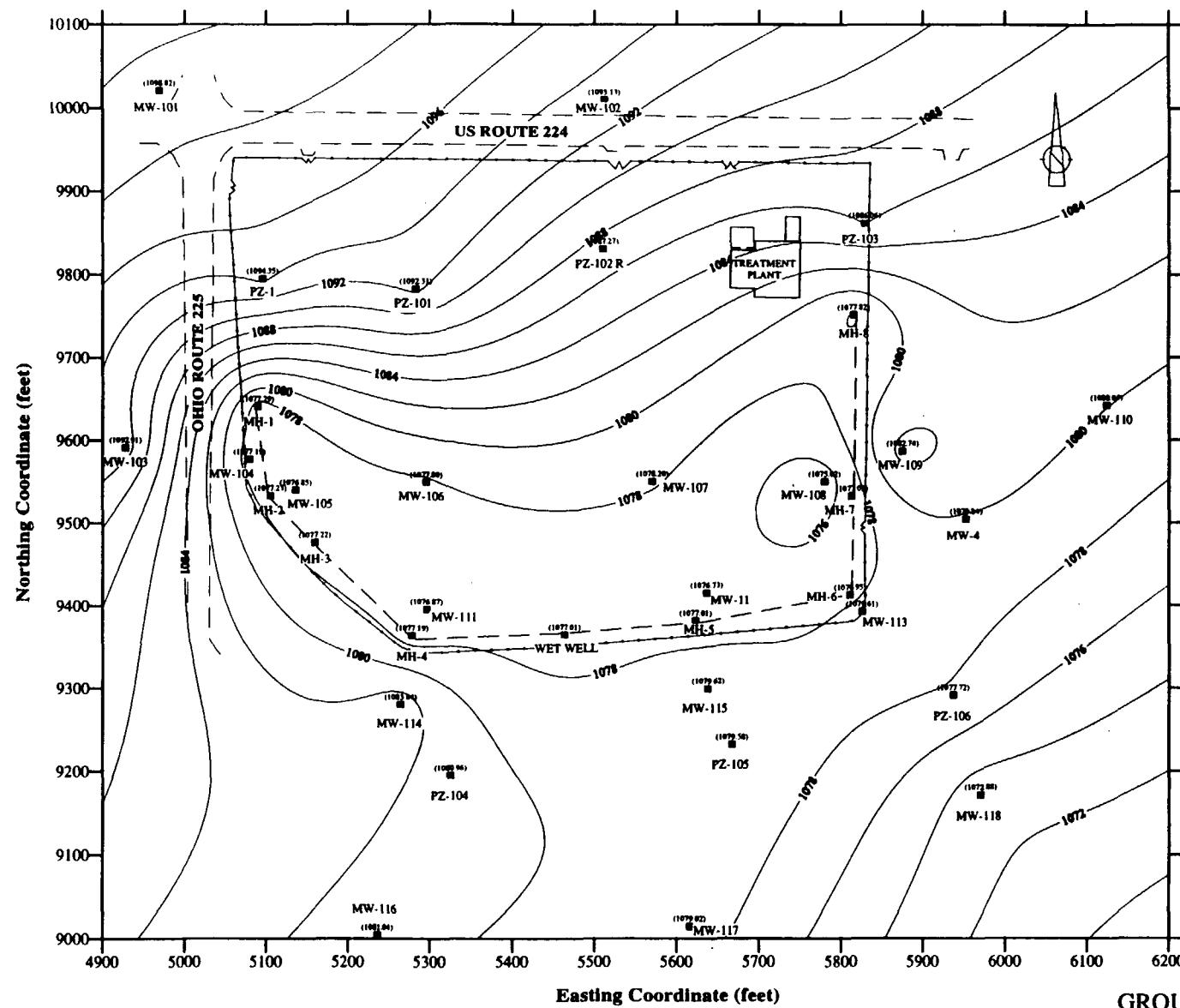
GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-422
SUMMIT NATIONAL SUPERFUND SITE



GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: POT. WELL
SUMMIT NATIONAL SUPERFUND SITE

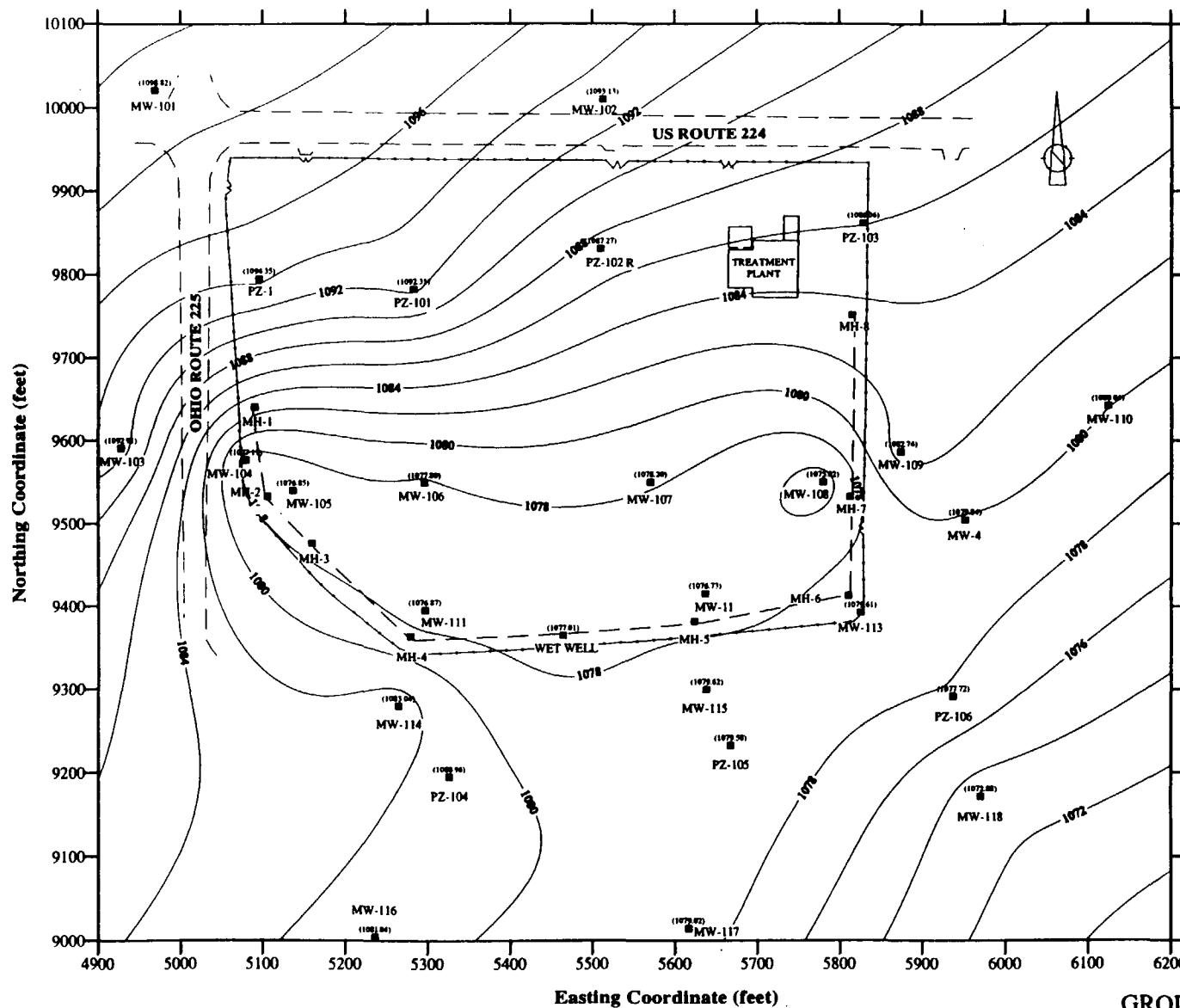


ATTACHMENT E
GROUNDWATER CONTOURS



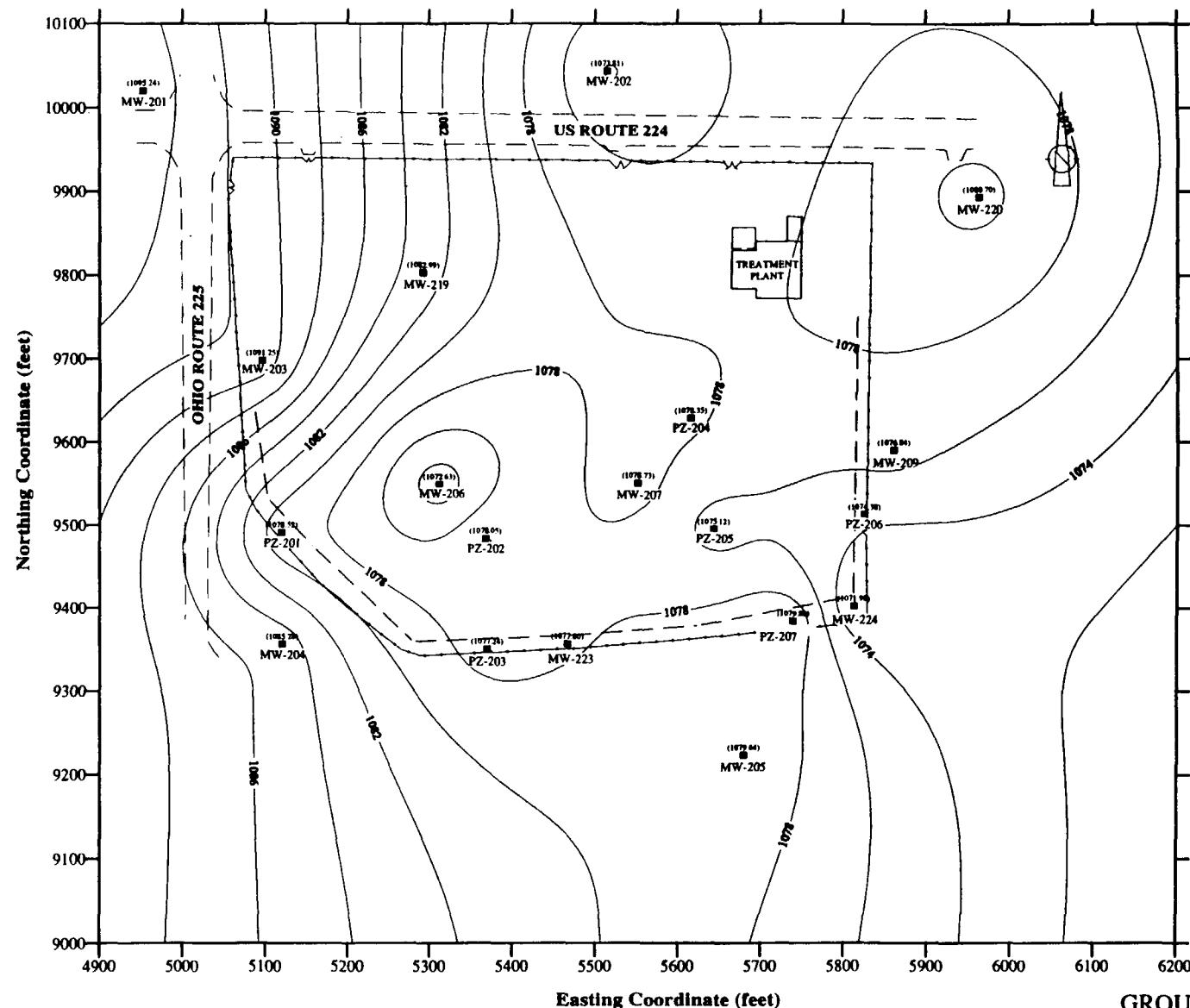
GROUNDWATER CONTOURS
WATER TABLE UNIT WITH MANHOLE DATA--May 19, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA



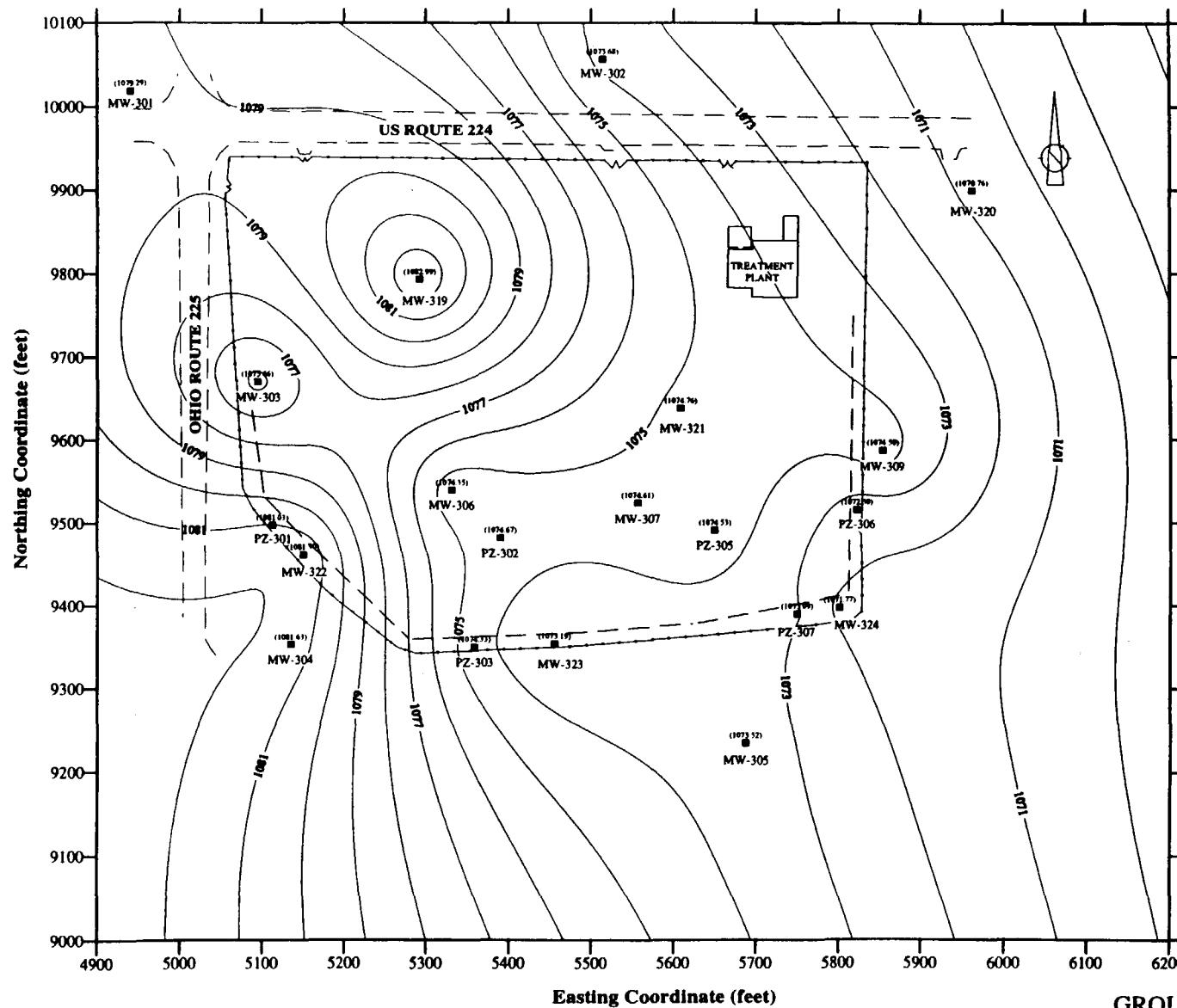
GROUNDWATER CONTOURS
WATER TABLE UNIT WITHOUT MANHOLE DATA -- May 19, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA



GROUNDWATER CONTOURS
UPPER INTERMEDIATE UNIT -- May 19, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

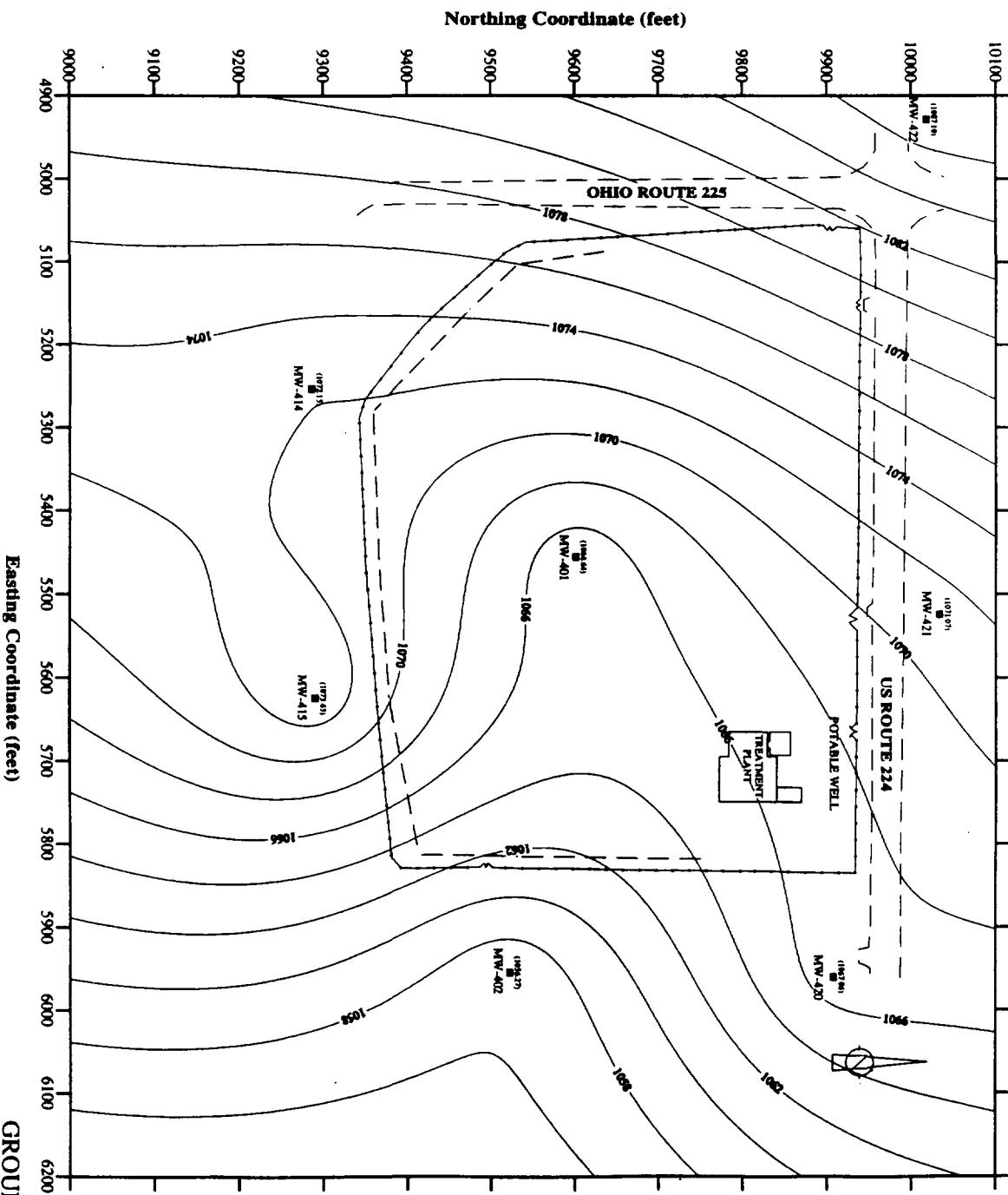
CRA



GROUNDWATER CONTOURS
LOWER INTERMEDIATE UNIT -- May 19, 1997
SUMMIT NATIONAL SUPERFUND SITE

Deerfield, Ohio

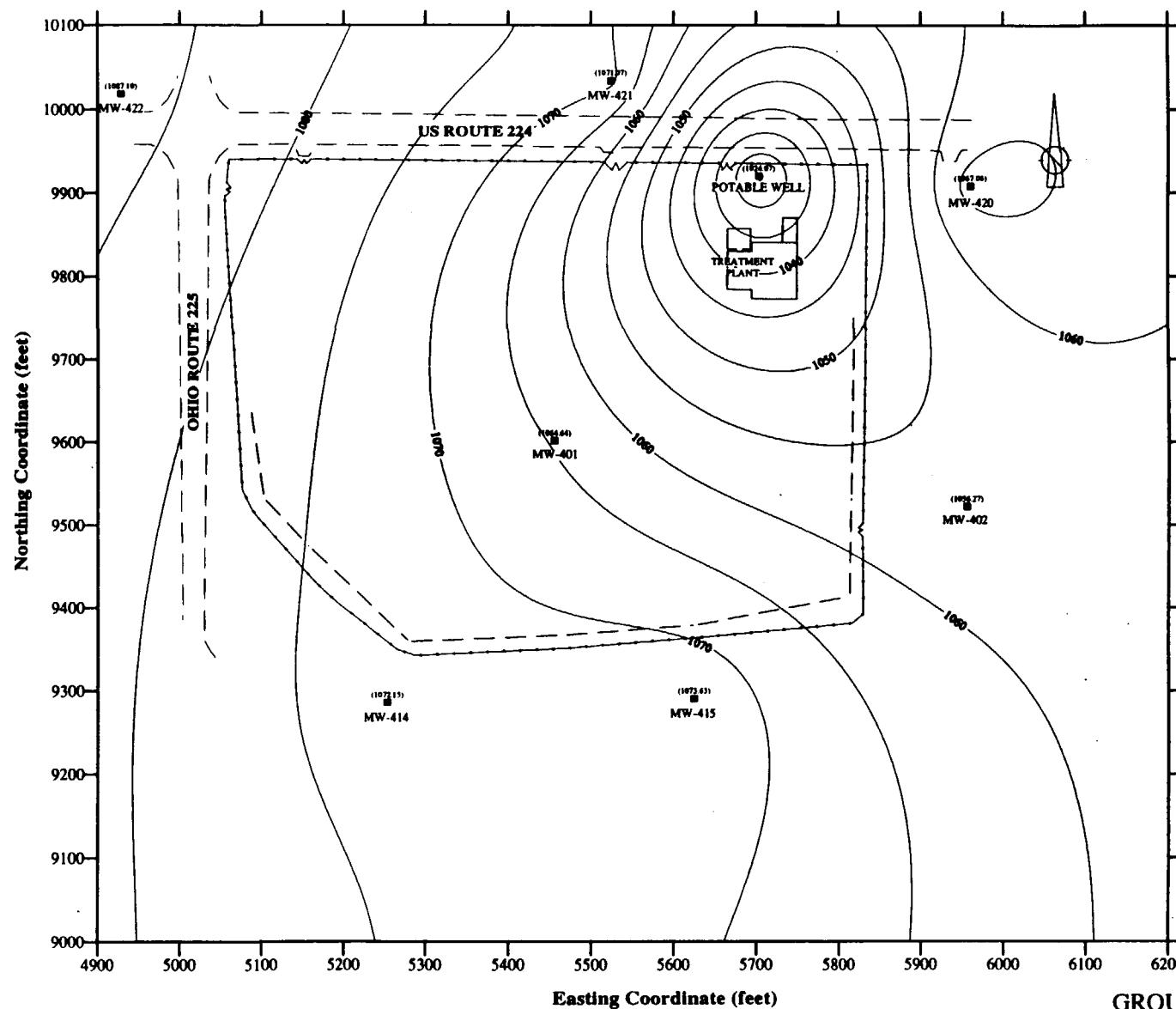
CRA



GROUNDWATER CONTOURS
UPPER SHARON UNIT (without potable well) -- May 19, 1997

SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA



GROUNDWATER CONTOURS
UPPER SHARON UNIT (with potable well) -- May 19, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA

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DOC ID #	128685				
DESCRIPTION OF ITEM(S)	MAPS				
REASON WHY UNSCANNABLE	<input checked="" type="checkbox"/> Oversized	<input type="checkbox"/> OR	<input type="checkbox"/> Format		
DATE OF ITEM(S)	07-01-1996				
NO. OF ITEMS	4				
PHASE	REMEDIATION				
PRP					
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O.U.					
LOCATION	Box #	3	Folder #	8	Subsection
COMMENT(S)					

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10-22-81 APPROVED BY WAD

132298

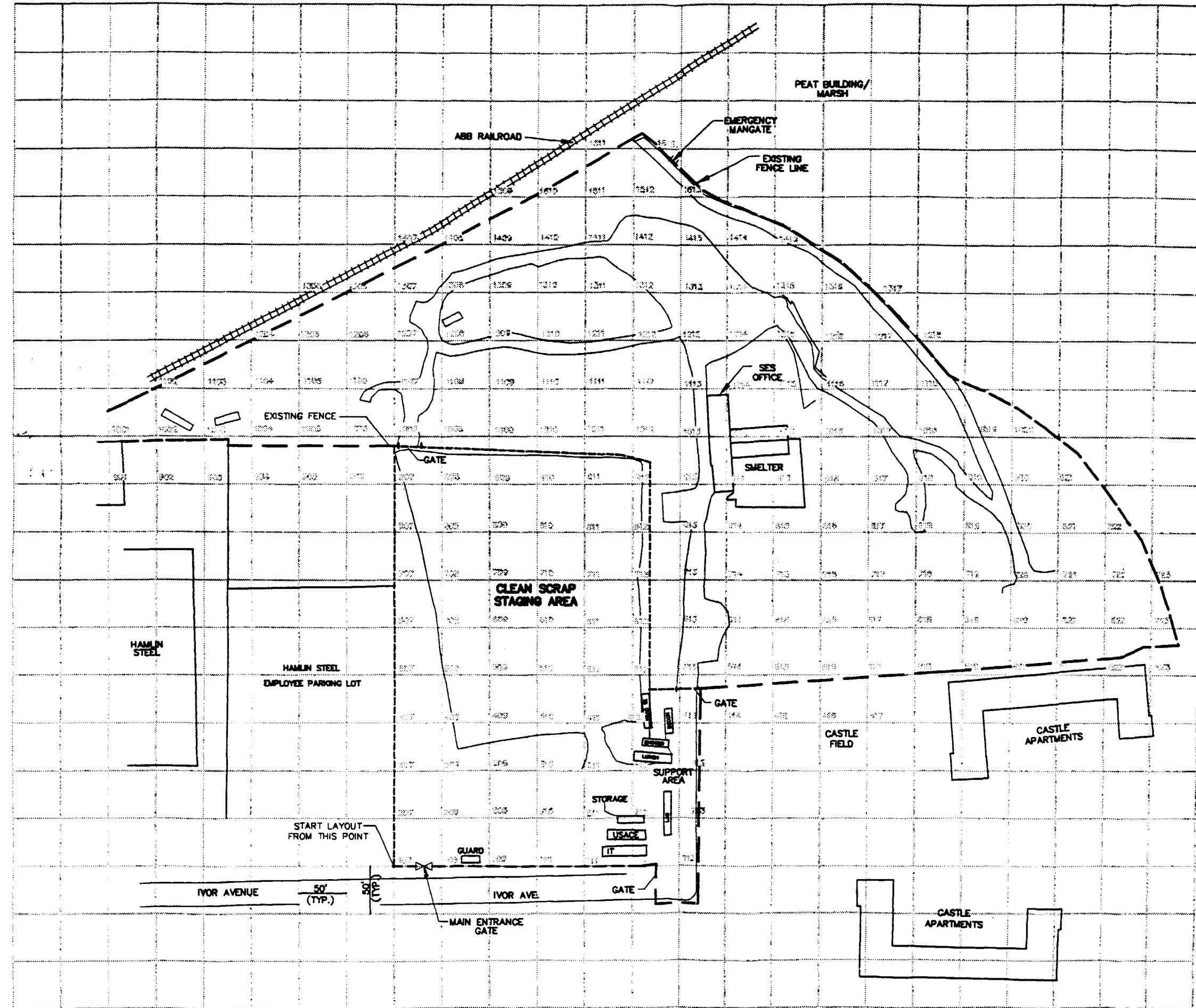


FIGURE 2
SITE GRID SYSTEM LAYOUT PLAN
CONTRACT NO. DACW45-90-D-0002
DELIVERY ORDER NO. 33
SUMMIT EQUIPMENT AND SUPPLY
875 IVOR AVENUE
AKRON, OHIO

PREPARED FOR

ARMY CORPS OF ENGINEERS
USACE
OMAHA, NEBRASKA

I INTERNATIONAL
TECHNOLOGY
CORPORATION